

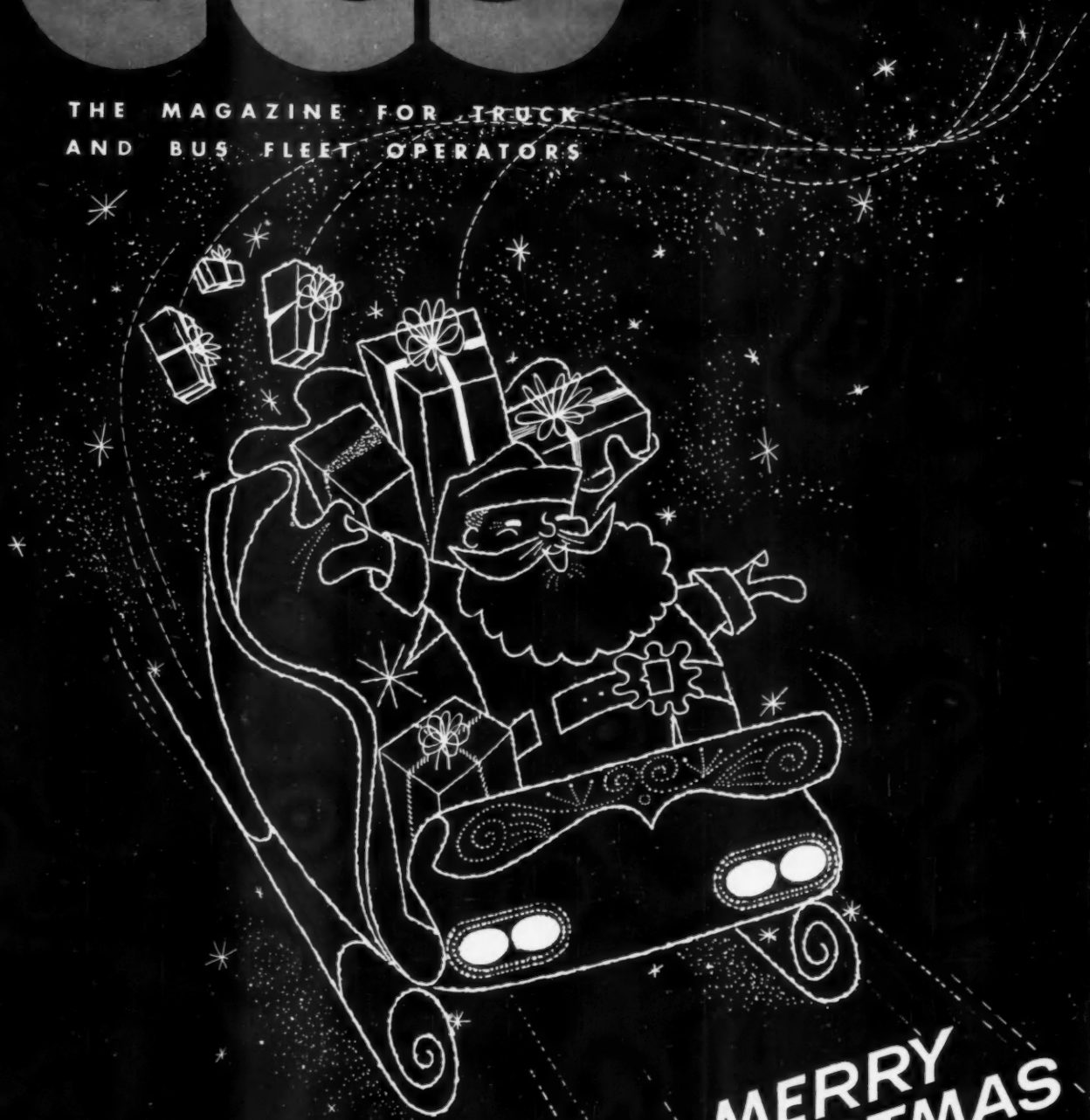
DECEMBER 1957

CCJ

COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK
AND BUS FLEET OPERATORS



MERRY
CHRISTMAS



**New advantages for fleet owners
introduced in all-new
Dodge Power Giants for '58**

Power, payload, economy and styling features make Dodge 4-way leaders of low-priced 3

Recent introduction of the new '58 Dodge *Power Giants* brings fleet owners a series of the most outstanding advances in Dodge truck's 40-year history.

In power, for instance, Dodge offers three new *Power Giant* V-8's that provide up to 234 hp. . . as much as 24% more than other low-priced makes. These extra-powered engines can take it easy under normal loads . . . keep going longer, too.

Payload capacities are up to an all-time high. Chassis construction features the elimination of excess weight while actually increasing strength. You get as much as $\frac{1}{3}$ more payload capacity.

When it comes to economy, Dodge sweeps the field because of its exclusive Power-Dome V-8 engine design that reduces harmful carbon deposits. This improves gas mileage . . . practically eliminates the need for major engine overhauls.

Dodge styling gives fleet owners a real prestige bonus. Striking dual headlights, massive new grilles and luxury cabs are exceptional highlights.

All in all, fleet owners would be well advised to check into the '58 *Power Giant* line-up before replacing or adding units. These Dodge trucks are definitely four-way leaders of the low-priced three.

DODGE Power Giants



Four Leading Trucking Executives Praise Results with RCA 2-Way Radio



Chester Yri
Seattle Terminal Manager
CONSOLIDATED FREIGHTWAYS, INC.

"RCA 2-Way Radio has increased our pounds per man-hour. Our records show that in some cases we have increased as much as 6 to 8 stops per pick-up man per day. With radio we are able to load our line—haul equipment more efficiently and improve our schedule departures. We are very pleased with our RCA installation in Seattle."



John M. Akers
President
AKERS MOTOR LINES, INC.

"Radio greatly improved the efficiency of our operation. We have found that the installation of RCA 2-Way Radio has increased the number of stops per truck per day up to approximately 25%. Any company that operates pick-up and delivery service can use 2-way radio very effectively."



Robert Shenberger
Terminal Manager
MASON & DIXON LINES, INC.

"Our RCA Quiet Channel Equipment lives up to its name, cutting out all 'channel chatter.' We're sure of fewer repeat messages—more dispatched vehicles per hour than with ordinary equipment. We're sold on RCA 2-Way Radio for trucking use."



Ted Vanesh
Director of Terminal Operations
SPECTOR FREIGHT SYSTEM, INC.

"Radio has enabled us to reduce our terminal operating costs. We don't have the dead time we had in the past or the time involved in locating a phone booth where the driver can call the dispatcher. The use of RCA 2-Way Radio in our pick-up and delivery service gives us more productive time."

Heightened efficiency, more stops per day...

Increased business and higher profits go hand-in-hand with radio-equipped motor carriers. And most of these users choose RCA 2-Way Radio because of its reputation for quality and the better service it provides for customers. You enjoy such benefits as 6/12-volt interchangeability, lower standby battery drain, high quality voice transmission, and RCA Service. Be sure the equipment you buy offers all these benefits. Specify the RCA "Carfone" for your next installation.



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of AMERICA**

COMMUNICATIONS PRODUCTS

CAMDEN, N.J.

Radio Corporation of America
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In Canada: RCA VICTOR Company Limited, Montreal

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NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ COUNTY _____ STATE _____

COMMERCIAL CAR

—December 1957 • Vol. 94 • No. ⁴~~3~~—

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Aim Dual Headlights with Care 66

Most 1958 models sport four "eyes" instead of a pair. New headlamps give 150 watts road light

Mechanically, What's New in '58 Cars 68

Innovations in 1958 include engines more accessible for maintenance, non-slip differentials and air suspension

Nashville's New Shop Boosts Efficiency 70

Bus property finds that more work is done in less time even though new shop is smaller than old streetcar barn

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There's no guessing when scientific tests and guided interviews help local managers choose qualified staffs

A New Approach to Efficient Maintenance... 82

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Should Users Pay 100% of Highway Costs?... 84

Yule Fisher, research counsel of NHUC, answers a question that affects both your highway use and general taxes

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Each pair of trailer wheels in its tandem suspension are clamped separately to rubber "Torsilastic" unit

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ON THE COVER . . .

Santa won't have trouble with his four headlights. He followed the aiming instructions that appear on page 66, this issue. More important, however, with this cover and its greeting (see page 5), we send all you fleetmen our best wishes for a . . .

. . . MERRY CHRISTMAS

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will be remembered long after
the price has been forgotten..."**



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simple bolt-on installation... G.M.C.
truck bracket furnished... 3 screw
tension adjustment head...
Sonderized... finished in rock hard
black baked enamel.



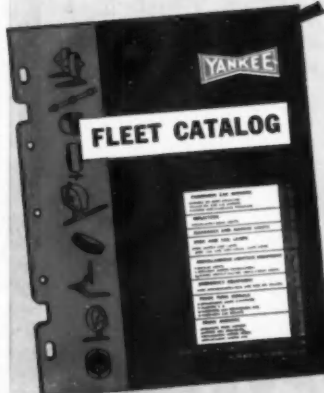
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changeable with standard equip-
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Complete with plug connector,
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fleet
maintenance
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"So what if I furnished it homey-like? Since the boss specified full-depth Airfoam seats, I spend my off-time here!"

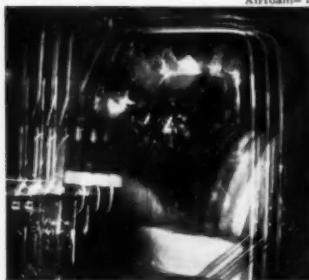
How full-depth AIRFOAM seats ►
increase driver-efficiency, cut costs:

You can specify Full-Depth
AIRFOAM seats and backs as
original equipment on any truck!
But be sure it's



Airfoam
MADE ONLY BY
GOODYEAR

The World's Finest, Most Modern Cushioning



MULTIPLE-EXPOSURE PHOTO shows how the usual spring-and-padding type cushions amplify drags and jars. Also, time-lag in spring-action causes driver to bounce up as controls come down. Trying to compensate, driver cramps muscles, frazzles nerves, drains efficiency. Cushions wear out, too!



SAME CAB WITH FULL-DEPTH AIRFOAM SEAT AND BACK. Over half-a-million fresh air cushions per cubic inch absorb drags and jars, keep driver's motion in step with controls. Result: Fresher, cooler, more efficient drivers. Cushions, being all one piece, don't sag, snag, break down or ruin covers.

Goodyear, Automotive Products Dept., Akron 16, Ohio

THE OVERLOAD

E D I T O R I A L C O M M E N T

Sputnik Vs. Saint Nick

DID YOU notice the front cover? We made it this year's Christmas greeting from all of us to all of you. We like to think that in the days and even months ahead, the spirit of Santa in his modern sleigh—four headlights and all—will be more important to you than all the "Sputniks" in the sky.

And speaking of the sky, there was a bright star there some 1957 years ago. Nobody quite knows where it came from. But the Wise Men saw it and followed it on a long journey to the little town of Bethlehem.

Did you ever stop to consider that this was the beginning of the Christmas rush? Today you folks in the bus business can credit a lot of extra passenger miles to those three.

The Wise Men carried their own gifts—gold and frankincense and myrrh. Today's travelers carry a few. But like everything else we use, modern Christmas packages come and go by truck.

At this moment when we're all bogged down with the extra push of the Christmas rush, it might be well to give credit where credit is due. Chalk-up a few billion extra ton-miles a year direct to the Wise Men.

And then—when the last package or the last passenger has been delivered on Christmas Eve—let's take time out to remember the *true* meaning of Christmas. For regardless of creed, it signals the beginning of a great new way of life based on the greatest life ever lived.

There will be more "Sputniks," more tensions, more problems in the days ahead. But the Christmas message still rings loud and clear: "Peace on earth, good will toward men."

Bart Rawson

Editor

Rough roads, heavy loads and changing wheel habits take the spunk out of any truck, whether owned or leased. Says President Bill Warren of the Rochester Truck Rental, Inc., Rochester, N. Y. "This is important for the man—owner or executive — whose cost per mile is not what it should be."



Borrowed mileage is the toughest in the world

"No two drivers handle a truck or a load alike. This one fact can take years off the life of any truck," says President Bill Warren. "That's when lubrication becomes a major factor in cost control."

"Our switch to the Texaco brand 4½ years ago has proved two things: It's best to find a high quality brand and stick to it. You can do this with Texaco because it is available everywhere."

"With Texaco, our trucks handle better, last longer and cost less per mile to run."

And Rochester Truck Rental (member of N.T.L.S.) is not the only firm that finds this so. Many a member of National Truck Leasing System's 20,000-truck fleet uses the Texaco brand exclusively for the same reasons.

There is a full line of Texaco lubricants for your operation wherever you are. A Texaco Lubrication Engineer will help you select the proper ones. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States — or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

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METROPOLITAN
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radio broadcasts
every Saturday afternoon



TEXACO



These are some of the Texaco lubricants that give Rochester Truck Rental, Inc., Rochester, N. Y. low-cost, year-round protection. *Texaco Marfak* provides chassis bearings with a dirt and moisture seal that won't squeeze or pound out. In wheel bearings *Texaco Marfak Heavy Duty 2*

protects against rust and wear; no seasonal change is required. Gears are protected against extreme pressure and erratic shifting habits with *Texaco Universal Gear Lubricant EP*. And engines deliver full power with great fuel economy, thanks also to 100% Texaco lubrication.

Lubricants and Fuels

FOR THE TRUCKING INDUSTRY

Tested over
1,000,000 miles
in one Georgia
fleet alone
The results
were
terrific!



Sealed Power KromeX Piston Ring Sets with the new Stainless Steel Oil Ring

Sealed Power's new stainless steel oil ring is a completely different material which permits full use of the advantages of circumferential abutment design.

Performance fleets want

This ring is independent of the bottom of the piston groove. It retains its original, built-in tension and conforms to cylinder bore even under tapered and out

of round conditions. It *cannot sludge or clog* because stainless steel will not pit or corrode—sludge cannot form. And its side-sealing—controls oil under high vacuum conditions.

Sealed Power's stainless steel oil ring can make a difference in your fleet maintenance and operating costs. Why not find out soon just how much you can save.

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power KromeX Ring Sets

BEST FOR RE-RING!

BEST FOR RE-BORE!



"Wha' Done It?"

TRYING TO take-off like a jet-assisted jack rabbit is the reason for this twisted drive shaft. When you find this, you better get after your drivers. Teach them to ease-up on the take-off. When you do, you'll probably find fewer other maintenance jobs as well as eliminating drive shafts that look like a licorice twist.

Do Not Bleed Tires

LETTING air out of tires as heat builds up air pressure above that recommended is known as "bleeding." This increase in air pressure, however, is a normal condition taken into consideration at the time of construction. Increased pressure will take care of itself so that bleeding is unnecessary. Bleeding tires is costly. It increases flexing resulting in still higher temperatures, tread wear and tire failures. When tire has been bled, air pressure drops below recommended pressure after its temperature returns to normal.

Internal Coolant Leaks

JUST a minute! Don't take that engine apart to see if there's a coolant leak until you try these two checks. . . .

First check is done with engine cold. Disconnect the water pump and drain the system only enough so you can remove the upper radiator hose and thermostat. Then fill to the top of the thermostat housing.

Now you are set to make the test. "Gun" the engine several times. Watch for air bubbles in the coolant, both while the engine is accelerating and when it drops back to idle. To spot small leaks, repeat the same test with a load on the engine.

One way to do this is to jack up the rear wheels, accelerate the engine with transmission in high gear and use the brake at the same time to apply the load.

If the coolant bubbles or if there is a sudden rise in its level, exhaust gas is leaking into the cooling system. Feeding a light oil through the carburetor will show up as smoke in the bubbles. Do this before the coolant boils to avoid confusion between smoke and steam.

. . . Another Leak Check

ACHECK for leaks in individual cylinders can be made with the spark plugs removed. With the piston just starting up on the compression stroke, apply air pressure (about 100 psi) through the spark plug hole. If there's a leak, it will again produce air bubbles at the top of the thermostat housing.

Cable Care

CABLE not secured to prevent vibration soon wears through its insulation to expose bare copper. Resulting shorts or grounds can (1) flip the circuit breaker, (2) run the battery down, (3) damage the ammeter, (4) even cause a fire.

Damaged insulation can be temporarily repaired using friction or rubber tape or a combination of both. Before you tape, however, clean the area with cleaning solvent and wipe dry. In replacing cables, use the same size as the manufacturer's original specifications—unless you need a heavier wire because you have added more load to the circuit.

Scratched Windshields

ONE OF the prime causes of scratched windshields is due to overtravel of the wiper blade. This causes the blade to lay over on its side on the return stroke, permitting the metal portion of the blade to contact the glass. This can be due to loose cables or improper positioning of the wiper arm.

(TURN TO PAGE 12, PLEASE)

A COMPLETE LINE...

You can depend upon Wagner Quality
because Wagner Products
are used as original equipment
by manufacturers of cars, trucks,
buses, and trailers.



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the best known name in brake service



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WAGNER LOCKHEED BRAKE FLUID surpasses S.A.E. specs. It's chemically balanced for dependable performance under *all* operating conditions.

WAGNER LOCKHEED BRAKE PARTS—cylinders, cups,

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WAGNER LOCKHEED BRAKE LINING is unsurpassed for quick, safe, smooth stops, and extra long service life. Available in sets, rolls, blocks, slabs, cut segments, and shoe exchange sets. For a FREE copy of Catalog AU-500 on our complete line of brake products, mail the coupon below.



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CCJ AT YOUR SERVICE

Continued from Page 9

Masking Tape Stains

CHEVROLET offers these tips to cut down on masking tape stains on repaint jobs. . . .

- Reduce to a minimum the time the tape is on the new finish. This applies to drying time under sunlight or ultraviolet lights (for lacquer) and under high baking temperatures (for enamel.)
- Be sure enamel finishes are properly "cured."

Says Chevrolet, the stains are thought to result from a chemical reaction between some ingredient in the tape and the paint. They usually show up slowly, often several days later. Stains are brownish in color, cannot be removed by presently known methods.

Booster Battery Tips

IF YOU use a 12-volt battery as a booster on 6-volt vehicles, American Automobile Assn. passes on these rules. . . .

- Connect booster cables to the stalled vehicle *first*, then to your booster.
- Always disconnect cables from the booster battery *first*, then from the stalled vehicle. This applies whether or not you have been successful in starting the stalled vehicle.
- Switch off all 6-volt accessories (close doors if there's a door-operated dome light switch) before connecting booster battery.

Batteries on stalled vehicles may be discharging highly explosive hydrogen gas. These rules reduce the possibility of sparks around the stalled vehicle's battery, cut down on the chances of blowing-up the battery.

Hydraulic Tappet Noise

WE HAVE BEEN advised that some shops are mixing automatic transmission oil with crankcase oil as a cure-all for noisy hydraulic tappets. To date we have talked with several experimental-minded mechanics who claim they have mixed two quarts of automatic transmission oil to three quarts of engine oil at the drain period with some success.

Actually, we feel this is a step in the wrong direction unless the engine has a tendency to cause a foaming action—very rare in today's engines—in the engine oil. It must be realized that automatic transmission oil is not recommended as a motor oil. The oil additives are not designed to handle combustion sludge normally

(TURN TO PAGE 16, PLEASE)



MORE MILES AT LESS COST

Lee Super DeLuxe Highway Nylon Tire has many premium features

The Lee Super DeLuxe Highway Nylon Truck Tire *costs less per mile*. That's because its premium features result in long original mileage and greater carcass strength for multiple recaps.

The extra-strong, extra-tough nylon cord provides maximum protection against impact bruises, blowouts and moisture damage. Nylon gives you a cooler-running tire, too, because there is less bulk. All cords are treated by Lee's exclusive double-dip Flexlok process which reduces heat, resists the effects of repeated flexing, and makes cord separation from the rubber bond practically impossible.

Every component of the tread design contributes to maximum mileage, better traction and cooler running. Only

the best grade of Smoked Sheet natural rubber is used. The flat contour and the deep tread put more rubber on the road to distribute the load and increase tire life. Angular center-tread grooves and the bars between the ribs help prevent little cuts from becoming big cracks.

Lee Super DeLuxe Highway Nylons—tubed or tubeless—are an outstanding tire buy! Write direct, or look for "Lee of Conshohocken" in the Yellow Pages of your Telephone Directory.

The complete Lee line, shown below, includes a tire which will lower *your* operating costs by giving longer life, more recaps. Let us prove it to you.



LEE RUBBER & TIRE CORPORATION

CONSHOHOCKEN, PA.



30-MILLION MILES OF SOLID PROOF—GENUINE FORD PARTS KEEP THIS FLEET ON THE JOB!

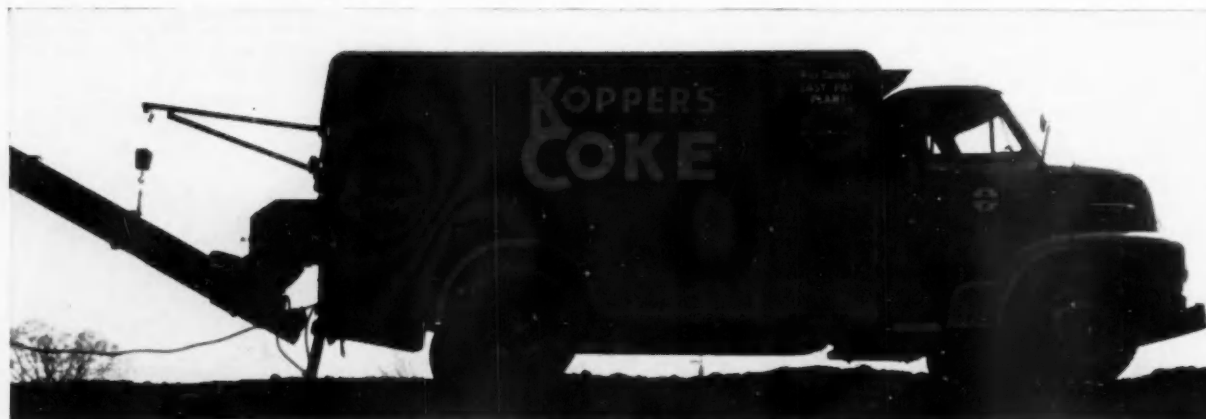
In any field . . . on any job . . .

Genuine Ford Parts keep

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"GENUINE FORD PARTS ARE TOPS FOR OUR DOUGH ON A 33,000-MILE DAILY ROUTE!"



"GENUINE FORD PARTS HELP US KEEP THE HOME FIRES BURNING!"



MILLIONS OF MILES A YEAR—GENUINE FORD PARTS KEEP 'EM WORKING ON THE L & N RAILROAD!

Ford fleets on the *GO!*

Like the famous companies on this page, you'll find it's smart business to specify Genuine Ford Parts for your fleet, whether you operate one Ford or hundreds. They cut costly downtime because they're made right, to fit right, to last longer!

Genuine Ford Parts are made to rigid specifications drawn up by Ford engineers and designers, and they are held to these high standards by rigid quality control during manufacture. Best of all, Ford quality parts cost you no more!

It stands to reason, your fleet will perform best when you use Genuine Ford Parts. They're available through Ford Dealers everywhere!

KEEP YOUR FLEET
ON ITS FEET!



GENUINE FORD PARTS PASS RUGGED 40-YEAR TEST FOR SINCLAIR OIL!

IT'S THE FINISH THAT COUNTS...



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Here's the answer for the person charged with the responsibility of keeping a fleet or equipment ready for productive action. In Glyko Fleet Finishes, Nason's chemists have combined successfully lacquer's quick-drying properties with the economy of enamel. Easier and faster to apply, Glyko Fleet Finishes enable you to spray and be on your way in as little as 45 minutes. For *guaranteed satisfaction* and increased savings, specify NASON Glyko Fleet Finishes on your next order!

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- Trims maintenance costs
- Covers better — lasts longer
- Won't sag or run
- Pre-packaged for color consistency
- Ideal for trucks, trailers, machinery

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SALT LAKE CITY
SEATTLE
PORTLAND
TAMPA
WICHITA
NEWARK

CCJ AT YOUR SERVICE

Continued from Page 12

found in automotive engines. Since automatic transmission oil is not capable of handling sludge it is only a matter of time before the accumulated sludge messes up the inside of the engine.

Oil additives have been most helpful in keeping hydraulic tappets free from dirt. But, if dirt becomes lodged under the seat of the hydraulic tappet, the only sure way to correct the condition is to remove the hydraulic tappet from the engine and clean out the dirt or replace the tappet assembly. We just haven't been able to find any short cut to correct tappets that leak down because of dirt imbedded under the seat.

Chevrolet Powermatic

EXPERIENCE has shown, says Chevrolet, that use of used nuts in installing 1956-58 Powermatic transmissions is not recommended. Only new nuts should be used on the six flywheel studs of the converter pump cover. Torque them to 30-35 lb ft. Re-used or undertorqued nuts are apt to loosen, permit flywheel to "work" on the studs. This action elongates stud holes sufficient to require replacement.

Watch Wheel Balance

WITH THE increased speed of motor trucks, wheel balancing has become more important than ever. The truck engine must be in balance. Otherwise, it would wear itself out from excessive vibration. Similarly, the wheel and tire should be in proper balance.

Due to normal wear and tear or incorrect assembly, the original balance may be changed and it often becomes necessary to rebalance the wheel and tire assembly for satisfactory performance of the truck and tire. In other words, wheels and tires should also be "tuned" as a regular service item.

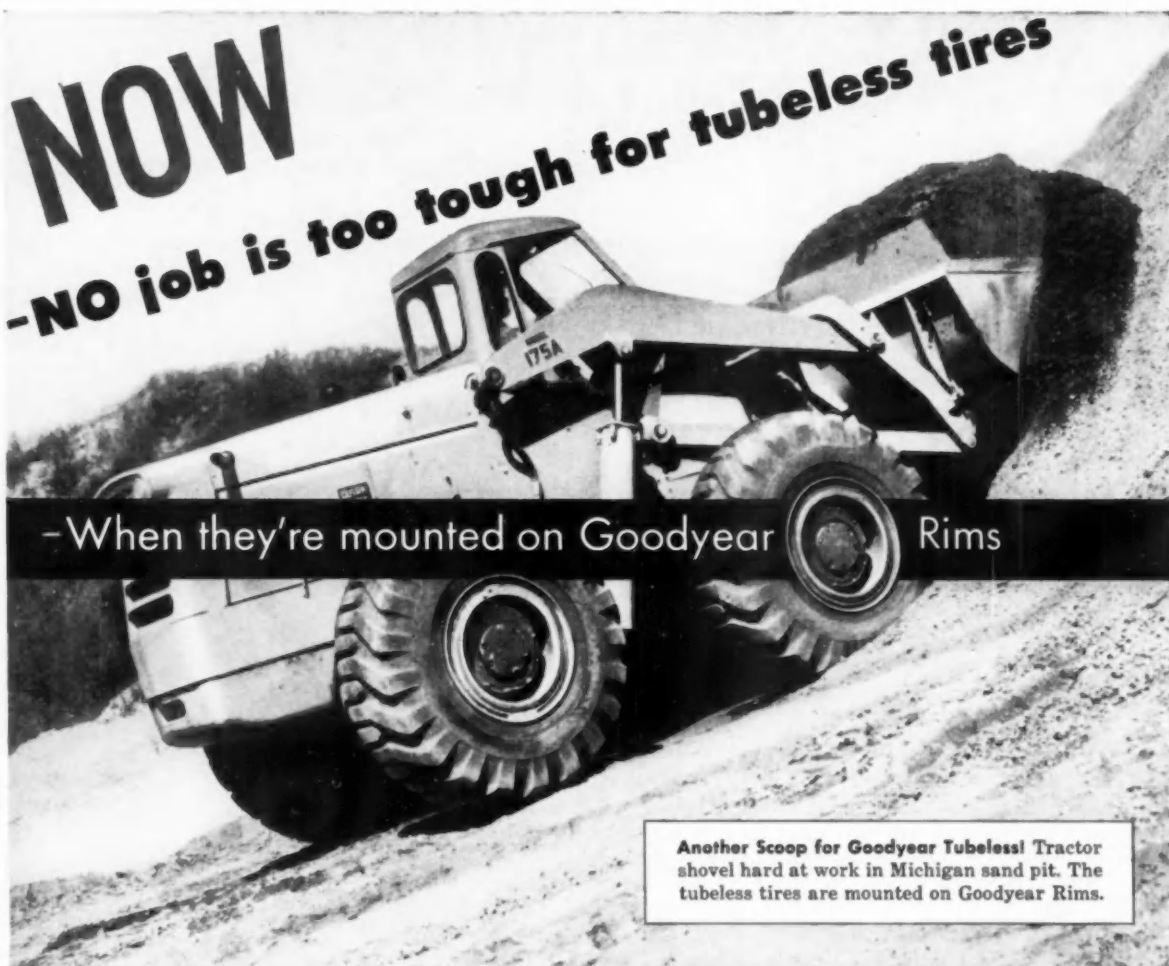
Wheel balance is the equal distribution of the weight of the wheel and tire assembly around the axis of rotation. There are two ways in which every wheel may be balanced—statically and dynamically.

Static balance (sometimes called still balance) is the equal distribution of the weight of the wheel and tire assembly about the axis of rotation in such a manner that the assembly has no tendency to rotate by itself, regardless of its

(TURN TO PAGE 20, PLEASE)

NOW
-NO job is too tough for tubeless tires

-When they're mounted on Goodyear Rims



Another Scoop for Goodyear Tubeless! Tractor shovel hard at work in Michigan sand pit. The tubeless tires are mounted on Goodyear Rims.

Here you see just a sample of the tough jobs tubeless tires are doing — in today's mammoth construction projects. How did tubeless tires get into this picture—and so successfully, too?

One of the biggest reasons is Goodyear's development of rims to fit every type of vehicle, from the smallest truck to the largest earth-mover.

Goodyear's vast tire-building experience brings many benefits to rim construction. With Goodyear Rims, you profit by such advantages as:

Unusual Strength: Thanks to an exclusive double-welding process, and added support at points of greatest stress, present-day Goodyear Rims are far stronger.

Ease of Tire Mounting: No tube and flap troubles.

Special Tools: Goodyear alone provides both hydraulic and hand tools especially made for off-the-road equipment.

Bond-a-Coat Finish: This protective coating affords long-lasting resistance to rust and corrosion.

Got a Truck Rim Problem? GOODYEAR will solve it.

If you have a rim problem, why not talk it over with the G. R. E. (Goodyear Rim Engineer). He'll save you time and money by helping you select the type and size of rim best suited to your needs. Write him at Goodyear, Metal Products Division, Akron 16, Ohio, or contact your local Goodyear Rim Distributor.

**Buy and
Specify**

GOOD YEAR

MORE TONS ARE CARRIED ON GOODYEAR RIMS THAN ON ANY OTHER KIND

ACROSS THE BOARD

For every type of

NEW Mobilube GX

HIGH SPEED PROTECTION

HIGH TORQUE PROTECTION

You've seen it happen! The ever higher road speeds . . . the ever heavier payloads that put greater strain on today's commercial fleet axles and transmissions.

These increasingly severe operations led to the development of New Mobilube GX—the first commercially available multipurpose-type gear lubricant with a wide enough per-

formance range to protect axle and transmission under the severest operating conditions.

In fact, tests by vehicle manufacturers and users prove conclusively the ability of New Mobilube GX to provide maximum protection to gears and bearings in all services!

For across the board protection for your fleet depend on New Mobilube GX!

PROTECTION

drive axle and mechanical transmission

The Multipurpose-Type Gear Lubricant
with Greatest Performance Range
in Automotive History



Recommended for all
Hypoid, Spiral Bevel Gears,
Double Reduction Axles



Recommended for all
Mechanical Transmissions
of Cars, Trucks and Buses



Leader in lubrication for over 91 years



Tune in "TRACKDOWN" every week, CBS-TV.
See your local paper for time and station.

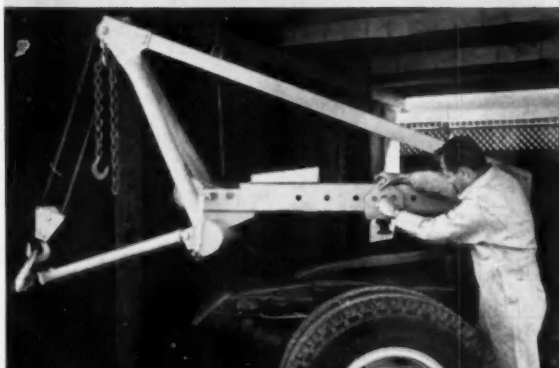
SOCONY MOBIL *Correct Lubrication*

A proved program to cut maintenance costs

SOCONY MOBIL OIL COMPANY, INC., and Affiliates: MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

You can cut TOWING COSTS WITH THE

NEW WATSON Towmaster



- ★ Pays for itself in just four tows
- ★ Makes any tractor into a first rate towtruck
- ★ One man can mount or remove it in only 10 minutes
- ★ Fits any tractor fifth wheel

You save both money and time with low cost Towmaster towing. One man can tow out a relief tractor, get the payload underway, and return the disabled tractor to your own shop for repairs by the men who know your equipment best.

The heavy duty Towmaster is big enough for all Highway breakdowns and most wrecks too—even three-axle rigs. All the weight is put on the tractive axle (or axles) to get excellent traction, braking, and maneuverability.



Watson Towmaster has no hydraulic system to dry out, leak or seize—no electrical parts to fail. It's a "lifetime" investment in low-cost towing when and where you need it! Why not get the facts now...write for free illustrated booklet today. Please address Dept. D-12.

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TOLEDO 12, OHIO

2

CCJ AT YOUR SERVICE

Continued from Page 16

position. For example, a wheel that is heavier at one point will always rotate by itself until the heavy side is at the bottom. Any wheel with a heavy side like this is statically out of balance. Static unbalance of a wheel causes a hopping or pounding action, commonly known as wheel tramp, which will also develop into wheel shimmy.

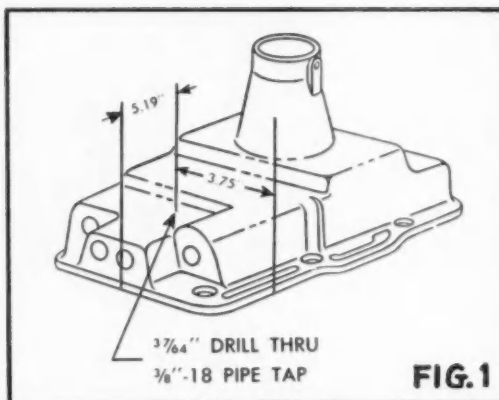


FIG.1

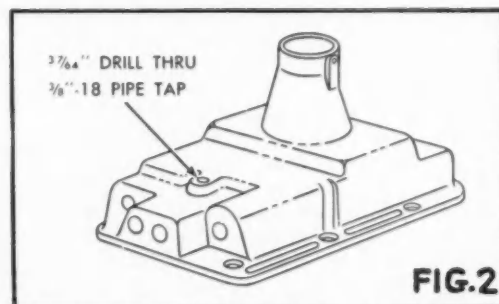


FIG.2

Transmission Oil Leak

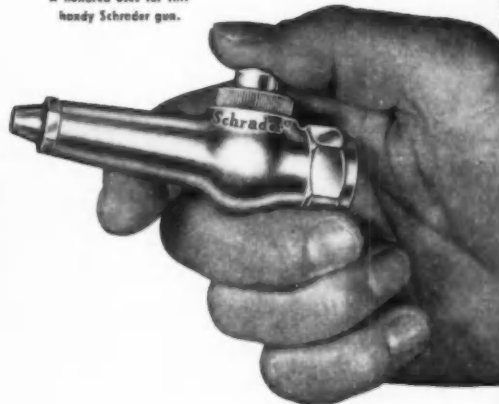
INTERNAL pressure sometimes pushes transmission lube out. It has been noticed on 1956-57 Chevrolet trucks with 5-speed New Process transmissions. Chevrolet Service News suggests installing a breather vent in the transmission cover. Chevrolet Part No. 2257165—a vent assembly—fits covers with or without a cast-in vent boss. On early model transmission covers without the vent boss, use Fig. 1 as a guide for installing the vent. Fig. 2 shows vent installation on later models with the vent boss.

(TURN TO PAGE 24, PLEASE)



##3650 Chuck Gauge
This new chuck gauge is setting all-time performance records. Install several.

##7104 Blow Gun
A hundred uses for this handy Schrader gun.



Good fleet shop practice pays off with



##8159 Dual Foot Chuck
Service even the largest duals without skinning knuckles!

##3332 type Airline Filter
Use a Schrader airline filter—save money—protect your air tools.

##8052 type Couplers
Make any air outlet as convenient as your electrical service outlets.

GENUINE SCHRADER AIR SERVICE EQUIPMENT

Quick, handy Schrader Air Products speed and simplify many jobs your fleet requires. Use them for improving your shop practices, like this:

1. Install extra airlines at strategic shop points so air is always at your fingertips, saving steps and time.
2. Make full use of the complete line of Schrader Accessories — blowguns, chucks, chuck gauges, adapters . . . they're handy for service anywhere in your shop.
3. Make certain tire pressures are accurately kept and checked with genuine Schrader Gauges before vehicle goes out on the road. Seal air in with Schrader Caps and Cores. Insure against flats on the road that cost money—catch them in the shop.

Another money-saving Schrader Air Accessory is a Schrader airline filter—installed at each major pipe outlet it keeps out oil, rust, moisture—protects valuable air equipment.

Improve your shop practices with
Genuine Schrader Products—
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FIRST NAME IN TIRE VALVES
FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Gets four benefits by switch to AMOCO* Lithium Multi-Purpose Grease

*Single grease now does the job in all
grease-lubricated bearings serviced by Bergsma Brothers*

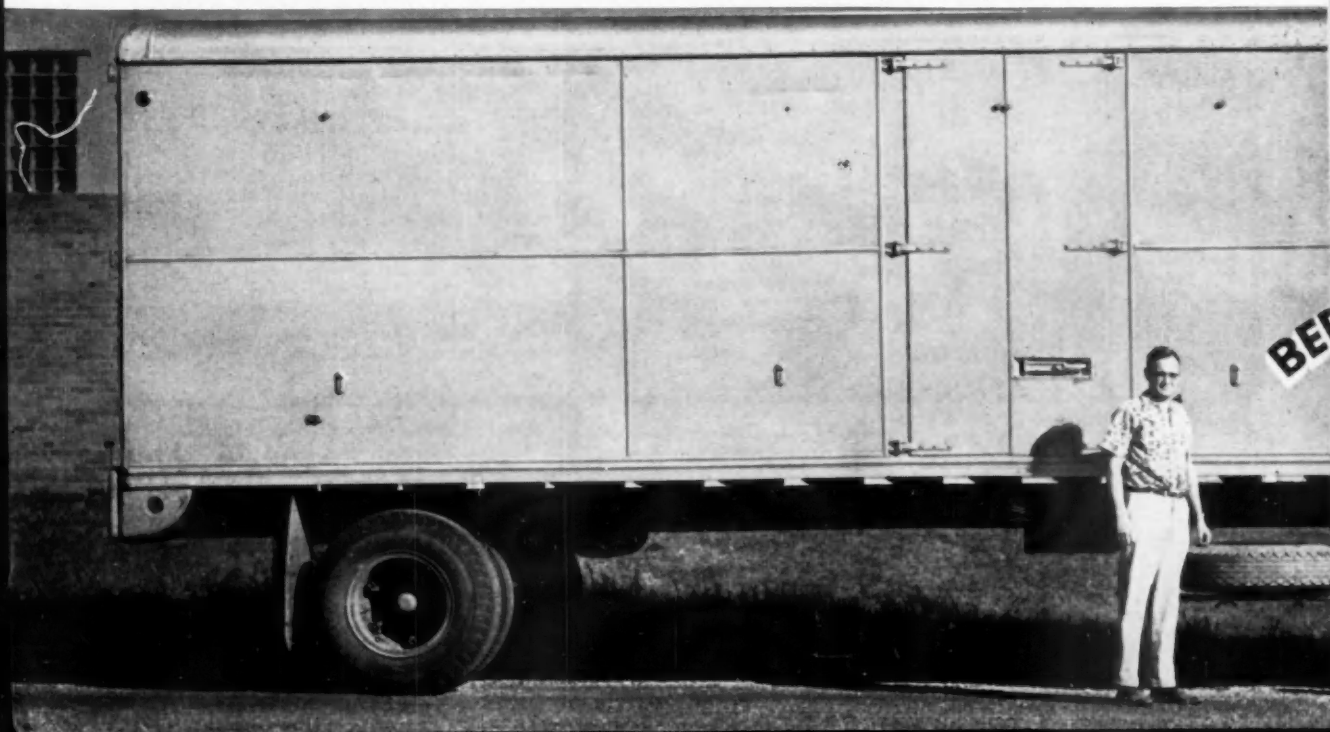
This Grand Rapids, Michigan, furniture manufacturer felt, as many people do, that a fibrous grease was needed for lubricating tractor and trailer wheel-bearings. They stocked a special grease for this purpose.

Standard Oil's Bob Cleland talked over the properties of Amoco Lithium Multi-Purpose Grease with Bergsma maintenance man, D. W. Edsall. It has, Bob explained, special heat and water resistant characteristics. It has the ability to maintain consistency in the severe service encountered in wheel-bearing lubrication. Bergsma Brothers tried it. Wheel-bearing overhaul due to lube failure stopped right then. There hasn't been one since the switch. Tractor wheel-bearings are lubricated every 10,000 miles, trailers every six months. The four benefits:

1. Better lubrication of wheel-bearings.
2. Elimination of a grease, cut inventories, reduced grease handling equipment.
3. Grease waste reduced.
4. Danger of grease misapplication eliminated.

Stake yourself to some savings like this and eliminate lubrication headaches at the same time. Check in with the Standard Oil automotive lubrication specialist that is near you in any of the 15 Midwest and Rocky Mountain states. Or write Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.

All of Bergsma Brothers fleet now use only one grease for wheel-bearings and ball-bearings which they lubricate.





D. W. Edsall (left), Bergsma Brothers maintenance superintendent, and Bob Cleland, Standard Oil lubrication specialist, discuss performance of AMOCO Lithium Multi-Purpose Grease. Bob is an able man on lubrication technical service. He's been giving this service to customers for five years. To qualify for such work, Bob has a degree in engineering from Michigan State. He has also completed the Standard Oil Company Sales Engineering School.

Quick facts about
AMOCO* Lithium Multi-Purpose Grease

- An all-purpose grease. Used wherever chassis, wheel-bearing or ball-bearing greases are specified.
- Available in two grades. Soft grade for use in extreme low temperature service.
- Available in convenient, sealed cartridges for easy, dirt-free insertion in grease guns.
- Resistant to heat and water.



STANDARD OIL COMPANY
 (Indiana)

*Trade mark AMOCO registered U. S. Patent Office by The American Oil Company and used by Standard Oil Company under license.



Continued from Page 20

Plymouth Brake Pull

BRAKE PULL OR dive on Plymouths can result from one or more of several conditions, all of which should be carefully checked to determine the cause.

1. Tighten the nuts on the end of both lower control arm struts, to at least 60 ft lb or until the nuts bottom on the shoulder of the strut.

2. Equalize air pressure in all four tires. Level the car and set front suspension to specifications.

3. Remove wheels and drums and check brake shoe retainers and guide springs for tightness and proper positioning.

4. Check to make sure return spring links are free to move to provide release of shoes.

5. Shoe return springs should provide a 40 lb pull on the toe of the shoe when the shoe breaks contact with the piston rod.

6. Inspect the spring loops on the shoes for possible drag on the dust shields. Only light contact on the dust shields is needed.

7. Tighten support plates and make sure they are not bent.

8. Inspect the shoe to be sure the web is welded parallel to the platform.

9. Make sure wheel cylinder pistons are operating properly.

10. Standard size brake drums are 11 in. in diameter and .005-in. undersize on new cars. It is important that the lining be ground to fit the drum. Check by placing a shoe in the drum and insert a feeler gauge between the lining and drum. If the feeler fits in anywhere in the center of the shoe, the lining should be cam ground 0.010 in. under drum diameter. This should give approximately 0.004-in. clearance on the heel and toe. Drums should be inspected for grooves or roughness before fitting the lining in place. (Courtesy Plymouth Product Information News.)

Checking Tandem Gear Ratios

RUNNING tandem axles with two different gear ratios can cause tire wear and produce high axle operating temperatures. The gears may eventually fail.

Here's how to check the differential ratio . . .

1. If unit has inter axle differential, lock it before starting check.

(TURN TO PAGE 28, PLEASE)

More Value for Your Dollar

WITH A BOYERTOWN HIGH-STRENGTH STEEL BODY

Boyertown gives you a choice of 17 standard Merchandiser* and flat face cowl bodies—all with the industry's most advanced features.

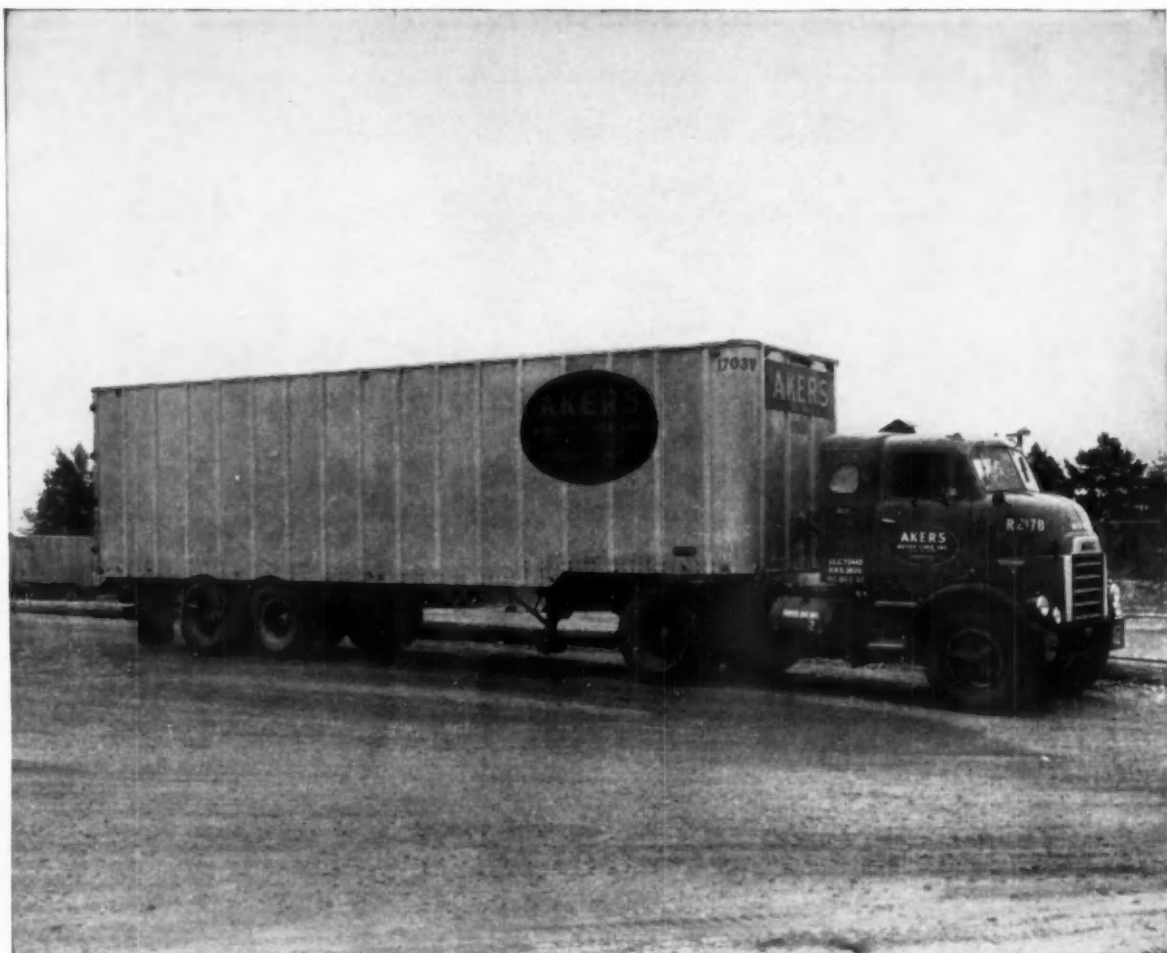
The highest traditions of Pennsylvania Dutch craftsmanship assure you of long body life, few repairs. Special construction and outfitting for your business gives you a custom body at a production line price. Put more pay in your payloads with a Boyertown.

*Reg. T.M.



BOYERTOWN
AUTO BODY WORKS, Inc.
BOYERTOWN, PENNA.

For complete information, call Boyertown 7-2146, visit or write



One of Akers' 40 new GMC DF-862 diesel powered units equipped with Fuller 10-speed R-96 ROADRANGER Transmission.

40 more FULLER ROADRANGER® Transmissions added to Akers' fleet

To Akers' original fleet of 10 GMC 860 tractors, 40 new GMC DF-862's are now being added...and *all* 50 are equipped with Fuller 10-speed R-96 semi-automatic ROADRANGER Transmissions. Says William H. Tomlin, Assistant to the General Manager and Superintendent of Equipment, Akers Motor Lines, Inc., Gastonia, North Carolina: "We are very pleased with the service that the Fuller ROADRANGER Transmissions are giving us. They are a favorite with our drivers."

Fuller ROADRANGER Transmissions give Akers Motor Lines:

- Easier, quicker shifts—28% steps between ratios
- One shift lever controls all 10 forward and 2 reverse speeds
- No gear splitting—10 selective gear ratios are evenly and progressively spaced
- Engines operate in peak hp range with greater fuel economy
- Less driver fatigue— $\frac{1}{3}$ less shifting
- Range shifts pre-selected—automatic and synchronized
- Compact space-and-weight-saving economies—the most compact 10-speed transmission available
- Transmission weight under the cab—permitting more cargo to be carried on the payload axles

Get full facts on Fuller ROADRANGER Transmissions from your truck manufacturer or truck dealer now!



FULLER MANUFACTURING CO. Transmission Division • Kalamazoo, Mich.
Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville,
Ky. (Subsidiary) • Sales & Service, All Products, West. Dist. Branch,
Oakland 8, Cal. and Southwest. Dist. Office, Tulsa 2, Okla.



This Truck is "All Shook Up" by a field-rebuilt, unbalanced clutch

The owner is "shook up," too. Three months ago, he installed a *field-rebuilt* clutch bought "at a price." Now, it has failed . . . and with it the crank-shaft, throwout and main bearings. A complete overhaul of drive-line components, from crankshaft to differential is necessary.

**Just 3 Inch-Ounces of Unbalance
Caused the Damage!**

Unfortunately, you can't detect such a small unbalance without sensitive testing machinery. Just a few dollars more for a genuine Lipe Guaranteed Clutch at the time of replacement would have insured the owner the use of such factory equipment . . . and

saved him a \$500 to \$800 overhaul job on his truck today. Here's why:

**9 out of 10 Rebuilders Are Not Equipped
to Balance a Clutch Properly**

Adequate testing machinery — much of it electronically equipped—is expensive. The field rebuilder usually doesn't have it. Many of them "make do" with something less.

**All Parts in All Lipe Clutches Must Conform to
the Same Material and Precision Standards**

From our experience in supplying clutches to 54 makers of heavy-duty equipment, comes the know-how that goes into the manufacture of the Lipe Guaranteed Clutch. That is why we can

unconditionally guarantee our product to be unequalled by field rebuilders.

Look for this red and white Factory Seal when you take delivery on a Lipe Guaranteed Clutch for replacement service. It is your assurance of long, trouble-free life and *big* long-run savings!



**SEND FOR OUR FREE
"Clutch Facts" Booklet**

Tells how to get more life from your heavy-duty clutches and what to look for when replacing them.



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Call your National Oil Seal jobber

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It's simple. Your jobber checks your equipment, and puts into your shop a select stock of oil seals your mechanics use regularly. He maintains the stock and modifies it as your equipment changes.

You always have seals when needed, don't add down time waiting for seals to arrive. You get perfect replacement since Nationals are original equipment.

No more in cost. But a real savings in down time! Ask your National jobber today to analyze your fleet's oil seal needs.

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Division of Federal-Mogul-Bower Bearings, Inc.
Detroit 13, Michigan



4403

Truck Owners: **STOP** WINTER TIME SKIDDING, SLIDING and SPINNING... with Positive Grip **BLACK BEAUTY**



Traction Grit



End costly delays, traffic tie-ups, dangerous skidding and sliding with **BLACK BEAUTY TRACTION GRIT**, the scientifically designed material that gives your tires a positive grip on icy, snowy and wet roads. **BLACK BEAUTY** is made up of sharp, clean, hard pieces that are always free flowing, will not freeze, and bite into ice and snow to give tires a dry, tough surface for pulling away and for straight, safe stops.

Order Now for Immediate Deliveries

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H. B. REED & CO., INC.
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THE BLACK & DECKER MFG. CO., Dept. S-4612, Towson 4, Md.



Black & Decker
QUALITY ELECTRIC TOOLS

CCJ AT YOUR SERVICE

Continued from Page 24

2. Jack up both drive wheels on one side of the unit.

3. Shift transmission into neutral.

4. Mark the pinion flange, or yoke, of the forward drive for a reference point.

5. Also mark the tire of each raised wheel.

6. Turn the forward drive wheel two complete revolutions. Note the number of revolutions of the marked pinion flange.

The number of revolutions of the pinion flange indicates the gear ratio of the forward axle and also the rear axle. This is true if the tire markings remain at the same relative position.

For example, two revolutions of the wheel and seven revolutions of the pinion flange means the gear ratio of the forward axle is 7.00 to 1.

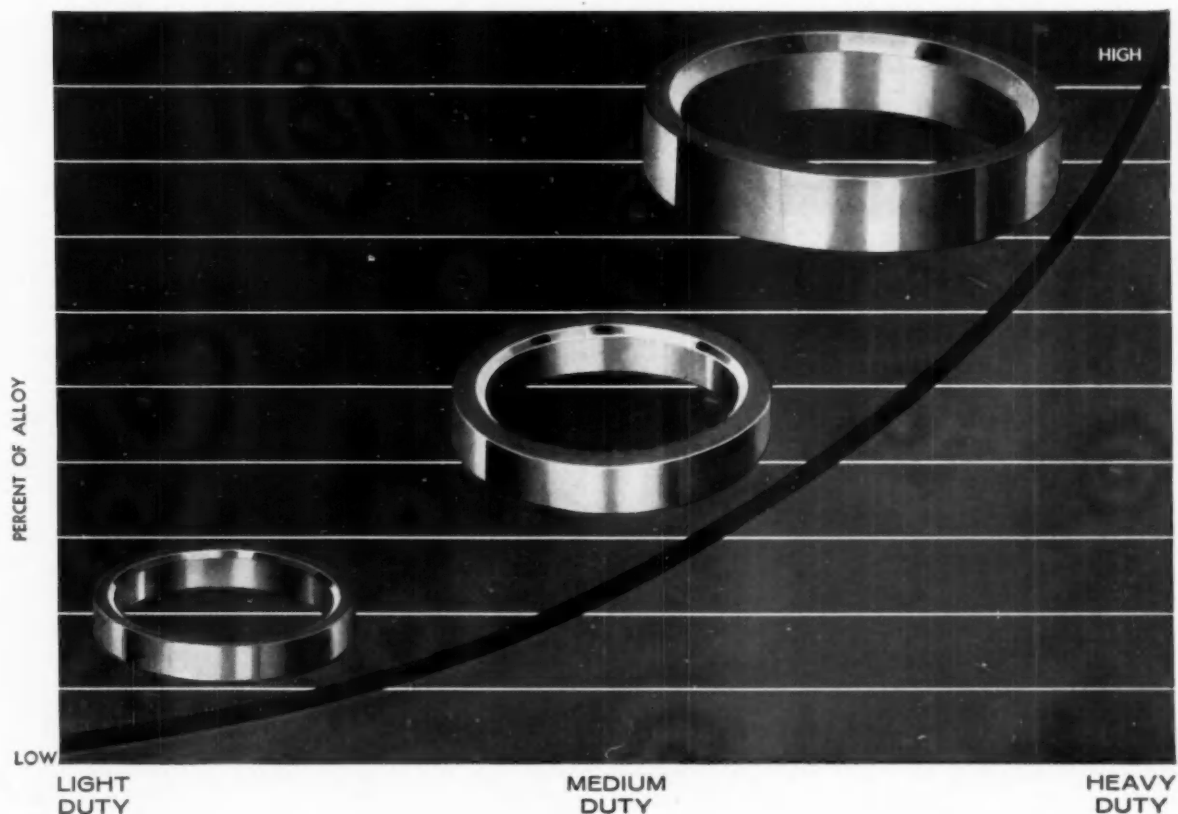
If only one drive wheel is free to turn, the ratio is checked by two revolutions of the wheel.

Tire markings on the rear wheels should be in about the same position as when the test started. If they are not, the ratios of the tandem are different. In the same manner as checking the front wheels, check the rear wheel gear ratio. Vehicle specifications will tell which ratio is correct. The incorrect carrier should be replaced or converted to the proper ratio.

Protect Turbochargers From Dirt

DIESEL engine turbochargers are precision-made components that must be protected from dirt at all costs if normal operating life of these units is to be expected, says Euclid. They must be protected from dirt when the engine is being serviced as carefully as when it is operating. A surgeon does not make sure that his patient gets only pure medicine, and then operate without protecting him from infection from other sources. By the same token, there would be little point in faithfully servicing the engine's air cleaners to protect the turbocharger from dirt and then allowing dirt to enter the turbocharger while it is removed during engine assembly. Thus special precautions must be taken while the turbocharger inlets or outlets are opened to prevent contamination by dirt.

When hoses from inlets or outlets of turbochargers are removed, these openings should be tightly covered with masking tape to keep out dirt. Also keep the area in which these units are serviced or repaired as clean as possible to minimize the danger of dirt contamination.



The RIGHT Insert for the Specific Application is Always the Most Economical

For heavy duty service involving extreme wear, corrosion, and oxidation, the highest performance high-alloy seat insert that can be produced is almost certain to be the most economical. On the other hand, for light duty service, a low cost insert of low alloy content may be adequate for the requirements. Eaton produces seat inserts "custom tailored" to meet the demands of each specific application — skillfully blends chromium, nickel, molybdenum, tungsten, cobalt, and iron to provide the right properties to overcome wear, corrosion, and oxidation. The result is inserts which will give optimum life at lowest cost, in the kind of service for which they are designed.

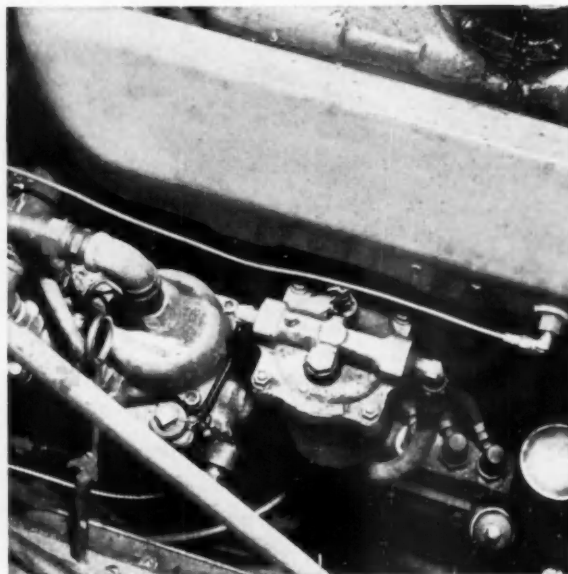
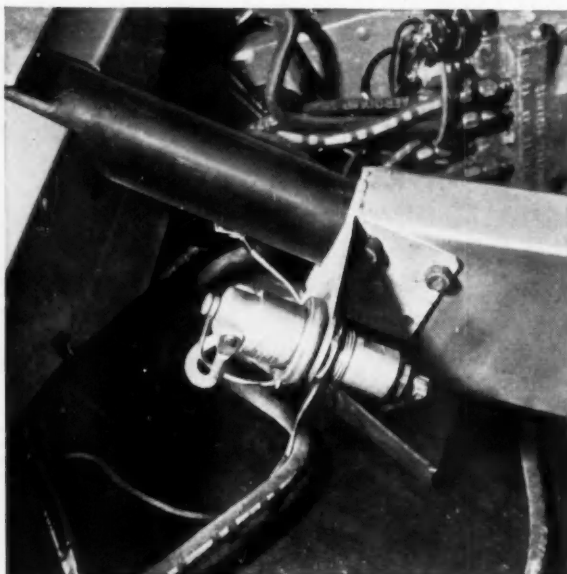
*Call our engineers for a consultation
on your seat insert problems.*

EATON — **SAGINAW DIVISION** —
MANUFACTURING COMPANY
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The Engineer's Field Report

CASE HISTORY
Chevron Pressure
 PRODUCT *Primer System*
Consolidated Freightways Inc.,
 FIRM *Portland, Oregon*

Pressure Primer System starts diesels on 1st or 2nd turn with regular batteries — at minus 40°



BELOW ZERO starting temperatures are common 5 months a year for Consolidated Freightways equipment operating in Mountain and Plain States. Two hundred and forty-four of the company's tractors are equipped with the Chevron Pressure Primer System. Since this installation, rigs start on first or second turn at 40° below zero—using regular equipment batteries! Normally in these sub-zero temperatures, regular batteries give out after about 4 turns. Sure starts plus the fact engines are primed with Chevron Pressure Primer bulbs, controlled from

within the cab, saves Consolidated Freightways important man-hours and speeds operating schedules. Picture above (left) shows a Chevron Pressure Primer Discharger mounted on steering column. Highly volatile priming fuel is atomized through tubing into manifold (right) under 250 lbs. pressure.

FREE FOLDER tells you more about Chevron Pressure Primer System and how to install it on different engines. Write or ask for it today.

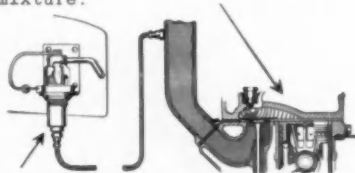


TRADEMARK "CHEVRON" AND CHEVRON
 DESIGN REG. U.S. PAT. OFF.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor, write or call any of the companies listed below.

Why Chevron Pressure Primer System helps starting

Volatile Chevron Priming Fuel atomizes in induction system at temperatures as low as -65°F. Pressure or weakest spark from engine fires mixture.



Simple, rugged discharger prevents fuel leakage. Small, safe steel bulbs protect fuel from water and dirt.

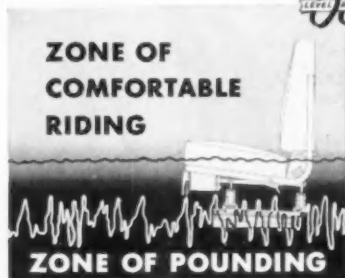
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DAREDEVIL CRASHES INTO



Courtesy Trans-World Daredevils

Your Drivers Do It Every Day



With a Bostrom "Level-Ride" 80 Seat road shocks and vibration are absorbed between the seat and the floor of the cab. You float smoothly over bumps and jolts.

Stunt drivers crash cars into a solid wall of ice to thrill the public. Punishing as this smashing impact appears, the shock your truck drivers experience every day on conventional seats is far greater.

No human body was ever designed to take the brutal torture of day-in, day-out pounding . . . the spine-shattering, kidney-jolting impact that comes from driving over rough highways.

No wonder the working span of the average driver is so short. No wonder such tired, surly drivers are a detriment to your business . . . no pleasure to their families in the evenings.

The logical, simple answer is to install a Bostrom "Level-Ride" 80 Seat in all your trucks. With this suspension seat shocks and vibration are absorbed between the floor of the truck and the bottom of the seat—not transmitted to the driver. He floats along on an almost vibrationless ride . . . no back slap or back rub, either.

Installed by many of the leading truck fleets . . . factory installed as optional equipment by all truck manufacturers. Available for replacement on your trucks from your truck parts jobber. See your Bostrom Distributor.

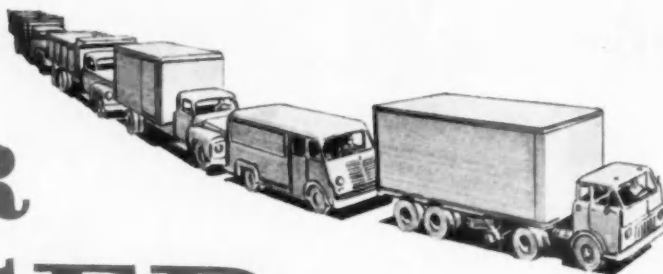
Bostrom Manufacturing Company,
133 West Oregon St., Milwaukee 4, Wis.



FREE MOTION PICTURE IN SOUND AND COLOR "Gentlemen, Be Seated," an informative motion picture on truck highway operation, is available without charge for showing to groups. Write for booking date.

This package contains

LONGER LONGER engine life



Cost-conscious fleet operators choose Perfect Circle 2-in-1 Chrome Sets because they give more road-time between overhauls. Fact is, PC 2-in-1 Chrome piston rings more than *double* the life of cylinders, pistons and rings because BOTH the top compression ring and the oil ring are plated with thick, wear-resisting solid chrome.

Top compression ring was specially designed to perform where pressures are greatest, heat is highest, lubrication is poorest. Type "98" chrome oil ring was specially designed to provide positive oil control for today's high-compression

engines. And PC 2-in-1 Chrome Sets seat faster because they are lapped in at the factory.

Install or specify Perfect Circle 2-in-1 Chrome piston rings at overhaul time—and be sure of longer engine life with sustained power and lasting oil economy. Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., 888 Don Mills Road, Don Mills, Ontario.

Don't Miss Your Doctor of Motors Clinic! Sponsored by your PC Jobber, the Doctor of Motors Clinic is packed with facts of great value to you. Plan to attend the next one. For your added interest and enjoyment, you'll see the exciting movie of the latest Indianapolis 500-Mile Race.



Type "98" oil ring—U.S. patent numbers 2,635,022 and 2,695,825

PERFECT CIRCLE

2-in-1 Chrome Piston Rings

Preferred by more people than any other brand



UP FRONT WITH CCJ

DECEMBER 1957 FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE, Federal-aid for highways was raked over the coals last month in hearings before the Subcommittee on Fiscal Policy of the Senate-House Joint Economic Committee. University of Illinois Economics Professor J. F. Due put it this way: Best reason for increased federal highway activity is because the states fail to do anything. He says, "Return of increased responsibility to the states in this field would be highly desirable but is very unlikely to occur." There is "considerable justification," says Stanford University Economics Professor H. S. Houthakker, for more federal-aid for urban highways. But, he warns, for intercity highways "... there is distinct danger of wasteful expenditures." As might be expected, a railway spokesman advocated that users pay 100 per cent of highway costs. (For an excellent rebuttal of this view, see page 84, this issue.)

USE TAXES earmarked for the highway trust fund (Mar. '56, page 20) are running about 20 per cent ahead of estimates. This fact was disclosed by Commerce Secretary Sinclair Weeks last month at a meeting of business magazine editors in Washington, D. C. Confirmation of this comes from National Highway Users Conference. Says NHUC, in response to a query by COMMERCIAL CAR JOURNAL, estimated income for the current fiscal year (ending June 30, 1958) is about \$2 billion. However, actual income—if continued at the present rate—will reach \$2.4 billion by that time.

SAFETY CHECK by Interstate Commerce Commission in October found not much change in number of vehicles found "defective or deficient"—87.3 per cent (as compared to 88.4 in August, 88.2 in July, 89.9 in May). This does NOT mean that 87 per cent of trucks on the highway fail to comply with the Commission's safety regulations. Says the ICC, "As in previous checks wherever the volume of traffic was such that only a portion of the interstate trucks could be given a detailed inspection, attention was focused upon vehicles which disclosed readily visible or audible indications of faulty conditions." Considerable improvement was noted in brake system defects. Out of the 10,685 vehicles checked, 46 per cent had faulty brakes. This was 16 per cent less than the 62 per cent found during the August inspection.

"HOT CARGO" clauses in trucking labor contracts took a beating last month. National Labor Relations Board ruled them invalid in common carrier contracts. Decision reverses a 1949 ruling by the Board which upheld "hot cargo" clauses. NLRB now finds that contracts so worded violate the secondary boycott prohibition in the Taft-Hartley Act. In a separate action, the ICC is debating adoption of an examiner's recommendation that common carriers lose their rights if they fail to give service because of "hot cargo" clauses.

DETROIT DISPATCH

AIR SUSPENSION FOR light trucks seems likely in '59 models, at least as an option. Reason is their introduction this year as an option on most car lines. (See page 68, this issue.) Use of the air springs on trucks and passenger cars spreads tooling costs over larger volume. Incidentally, about 15 to 20 per cent of cars sold in 1958 are expected to be air spring equipped.

TRUCK PRICES ARE up about 5 per cent on heavy and medium duty units. Largest boosts appear on heavier trucks and tractors. Average increase for light duty models amounts to about 3 per cent in most cases. Rising labor, material and freight costs are cited as major reasons for increased prices.

TRUCK LEASING WILL continue upward at a healthy clip, predicts Chrysler's B. J. Nichols. He estimates that by 1965 about 800,000 trucks will be operated under lease. That's more than triple the approximately 250,000 units being leased at the present time.

CHICAGO AUTO SHOW OPENS early next month (Jan. 4-12). It's the show's 50th anniversary, will be held in the International Amphitheatre. Nine truck makes, 19 American-made cars and 24 imported models will be on display. This dealer-sponsored show, along with last month's in Philadelphia, mark the formal debut of the '58 models. Next manufacturer-sponsored show is expected next fall in New York City to show off 1959 models.

DIESEL ENGINE POWER MAY be offered by Dodge in 1959 or 1960. It's now testing a diesel engine in 3 and 4-ton tractors. Dodge last offered a diesel-powered model in 1942.

DIESEL ENGINES APPEAR in 19.4 per cent of trucks rated 19,500 lb and over shipped so far this year, says Cummins Engine Co. This compares with 18.2 per cent for the same period of 1956. Says Cummins Vice President C. R. Boll, the increase in 1958 should be 5 to 8 per cent.

WASHINGTON WATCH

TRUCK-RAIL ANTI-TRUST SUIT WAS awaiting railroad action at press time. Truckers had drafted a proposed injunction to stop the railroads from continuing their illegal conspiracy in restraint of trade. Railroads will have a chance to object before Judge Clary "so orders." Once the injunction is issued, the railroads will appeal to higher courts.

TO LET RAILROADS OPERATE trucks would be "to expect safe delivery of lettuce by a rabbit," said ATA Board Chairman R. C. Williams at last month's convention of the Associated Motor Carriers of Oklahoma.

CONTRACT CARRIERS ARE having their troubles with the Interstate Commerce Act definition of contract carriage (Oct., pages 34, 90). Many are not too sure what they are—common or contract. Many are filing application for conversion to common carriage

because they are afraid they no longer qualify as contract carriers. One critical point is the meaning of the words "distinct need" in the second part of the new definition.

ATA'S CONTRACT Carrier Conference also objected to the ICC's making public the contract carriers' answers to the Commission's questions. ATA's Regular Common Carrier Conference and the Assn. of American Railroads have been microfilming the data. The Commission ruled that the information is to be made public. However, before it is, answers on hand will be screened "for the purpose of affording the responding carriers opportunity to delete unnecessary information, public knowledge of which might be detrimental to the interests of their shippers."

TRAILERSHIP OPERATION BETWEEN Atlantic and Pacific coast ports by Pan-Atlantic Steamship Corp. has been

GASOLINE OCTANE RATINGS AVERAGE 90.4 for regular grade, 97.9 for premium. Says the Du Pont survey of gasoline sold in 48 cities across the country, regular gasoline octane ratings range from 87.3 to 92.8. On the premium side, the range is 94.4 to 98.8. For the super premium fuels offered by some refiners, the range is 99.6 to 101.9, with an average of 100.9.

SUPER TRUCKS FOR super highways are being investigated by GMC Truck & Coach Division. Says P. J. Monaghan, division general manager, what's needed is "... a complete and radical departure from traditional truck design as we know it today."

TILT-CAB TRUCK MODELS ARE now offered by almost all big truck makers. Two new models were announced last month—International and Kenworth (pages 96 and 98, this issue). Of the three major truck makers not offering tilt cabs (Chevrolet, Dodge, GMC), two are reported developing models. One hopes to have it ready for its 1959 line.

OK'd by ICC. Owned by former McLean Trucking Co. boss, Malcolm McLean, Pan-Atlantic has been providing trailership service between Gulf and Atlantic coast ports. Pan-Atlantic uses demountable trailer bodies for the service. Latest ships in use are especially-built, have their own crane to lift the containers off and on the trailer chassis.

WHY DO DRIVERS drive as they do? Pure Oil Co. is cooperating with the ATA Foundation in seeking an answer to this question. Actual study is being carried on by Opinion Research Corp.

"SHIPPERS ALONE CANNOT Save the Common Carrier" was the title of a recent talk by Grant Arnold, National Industrial Traffic League president. Said he, "Many times it is necessary for shippers to circumvent the high rates and charges, or inferior services, of the common carriers, and particularly the railroads, in order to stay in business."

TRUCK TONNAGE

SEPTEMBER intercity general truck freight volume was up 4.8 per cent over that carried in September, 1956. However, says report from ATA's Research Dept., there was a 3.6 per cent drop from the tonnage carried in August, 1957. First nine months of 1957 show an increase of almost 1 per cent over the first nine months of 1956. Biggest '57 over '56 gains in September were in the Southern region—up 10.1 per cent, the Pacific region—up 9.7 per cent, and Southwestern region—up 8.1 per cent. See next page for a special forecast of 1958 truck freight volume.

Month	% Change from Previous Month	% Change from a Year Ago
September, 1957...	- 3.6	+ 4.8
August, 1957.....	+ 7.5	+ 2.5
July, 1957.....	+ 1.3	+ 7.3
2nd Quarter '57.....	.....	- 1.7
June, 1957.....	- 6.6	- 3.9
May, 1957.....	+ 2.7	0.0
April, 1957.....	.....	+ 3.1
1st Quarter '57.....	.....	+ 0.7
March, 1957.....	+ 7.5	- 1.8
February, 1957.....	- 7.0	- 2.4
January, 1957.....	+14.4	+ 3.7
4th Quarter '56.....	.....	- 0.2
December, 1956.....	-12.2	- 5.6
November, 1956.....	-10.2	- 1.4
October, 1956.....	+15.7	+ 7.9
3rd Quarter '56.....	.....	+ 0.4

TRUCK AND BUS PRODUCTION

Make	For Weeks Ending			Year to Date	
	Nov. 9	Nov. 2	Oct. 26	1957	1956
Chevrolet.....	8,265	7,917	8,222	299,048	304,884
G. M. C.....	1,632	1,746	1,609	58,694	79,987
Diamond T.....	125	135	109	4,902	4,561
Divco.....	.....	.....	.....	2,499	3,101
Dodge and Fargo.....	1,792	1,806	1,451	67,127	77,921
Ford.....	6,127	7,692	6,863	295,752	263,266
F. W. D.....	11	2	17	945	1,447
International.....	2,202	76	2,342	103,861	117,169
Mack.....	336	18	345	14,912	15,754
Reo.....	101	101	100	4,141	3,430
Studebaker.....	138	166	165	8,340	12,806
White.....	229	239	225	12,421	15,379
Willys.....	1,578	1,685	368	64,617	53,991
Other Trucks.....	80	70	70	3,650	5,779
Total—Trucks.....	22,616	21,452	21,880	940,909	959,375
Buses.....	60	95	50	3,454	3,773
Total—Trucks and Buses.....	22,676	21,507	21,930	944,363	963,148

Source: Automobile Manufacturers Association.

IN THIS ISSUE

- ... the spotlight is on
 - ... **FOUR HEADLIGHT** aiming, page 66
 - ... '58 **PASSENGER CAR** mechanical features, page 68
 - ... Nashville Transit's new **SHOP**, page 70
 - ... Armour's use of **REEFER PIGGY-BACK**, page 74
 - ... Smith system for **SAFE DRIVING**, page 78
 - ... Long lasting **EMPLOYEE SELECTION**, page 82
 - ... How to get **EFFICIENT MAINTENANCE**, page 82
- ... what's new includes
 - ... an independent wheel suspension **TRAILER**, two trailer **SUSPENSIONS**, two **COE TRACTOR** lines, **STUDEBAKER** trucks for '58. See pages 90, 94, 96 and 98. Regular **NEW PRODUCTS** begin on page 160

The Road Ahead



TRUCK TONNAGE SHOULD be up slightly in 1958. Reason is that the percentage of Gross National Product (sum total of goods and services produced) carried by truck has steadily increased over the past years. Even if the GNP for 1958 is the same as this year's (as most forecasters predict), truck freight should be slightly more next year than it was this year. Increased satellite and missile activity will tend to push it still higher.

TRANSIT AND intercity bus passenger revenue may continue to decline. However, the profit picture might be brighter. In spots around the country, bus properties are increasing revenue by (1) doing maintenance for other truck and bus operators and (2) entering the vehicle leasing business. As railroads meet with success in their efforts to abandon passenger services, intercity buses can look for more traffic. Transit passenger revenue drop may not be as sharp as previous years. There's some thought that passenger volume may be reaching the irreducible minimum.

SIZE AND WEIGHT STUDY WILL have its first phase made public at the Highway Research Board meeting in Washington, D. C., Jan. 6-10. It deals with existing shipments by commodity density in five-pound increments. Part 2 (covering truck operating costs as weight increases—up to 150,000 lb) and Part 3 (covering costs of providing roads with increased weight capacity) are still to come. All three have to be finished before the big debate—"Who pays how much for what size highway?"—can begin. It was scheduled to start with an overall report to Congress in January 1959. Since test traffic won't start on the AASHO Road Test until late next year, chances are a final report at that time is impossible.

PRIVATE TRUCK OPERATORS ARE looking forward to next month's annual convention in Philadelphia. Program committee has selected "Service with Safety" as the theme. Panel discussions being set-up include (1) Design for Efficiency, (2) Maintenance, (3) Driver Training, (4) Local Deliveries and (5) Interplant Movements. ICC, BMC Safety Chief Ernie Cox will be on hand to discuss the Safety Regs. Other topics include diesel engines, tubeless tires and truck leasing.

ILLINOIS CONTOUR mud flap law is back in court. New suit by four fleet operators says the law is unconstitutional since it cannot be reasonably enforced. They say the vehicle classifications set-up plus the exemptions provided result in a law that is "arbitrary, capricious and unreasonable."

HERE'S THE record for September and the first nine months of 1957 as compared to September and the first nine months of 1956:

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires					
									Replacement Shipments		Original Equip. Shipments		Inventory End of Sept.	
	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months		
1957	78.2	657.1	51.0	666.7	4.8	46.9	167	2619	805.4	6321.4	289.9	3150.7	3082.5	
1956	72.4	685.7	56.9	676.7	4.8	52.5	364	3037	811.0	6835.7	291.1	3531.7	3179.9	



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AKS MILEAGE RECORDS!

new **Hi-Miler Cross-Rib**—with extra-thick tread and 3-T Nylon body—delivers greatest original highway mileage!

Hi-Miler Cross-Rib features add up to vastly longer tread life—*pull-through* traction, instead of *pound-through*—and no heat-up headaches. In fact, the millions of miles now being rolled up by this great new highway tire bring floods of acclaim like this:

- 40% MORE ORIGINAL MILEAGE THAN ANY OTHER TIRE!

(Mountain State common carrier)

- NEW CROSS-RIB TIRES STILL HAVE HALF THEIR NONSKID DEPTH—WHILE OTHER TIRES ARE WORN TO CARCASSES!

(East Coast tank line)

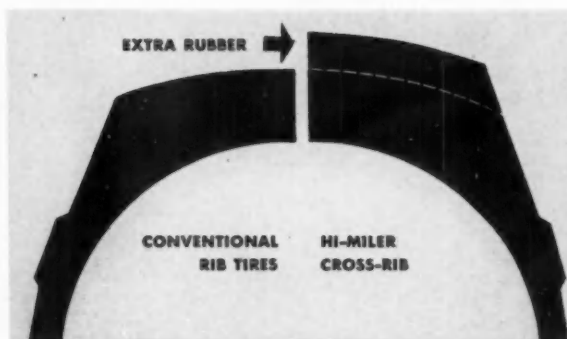
- 28% MORE ORIGINAL MILEAGE THAN ANY TIRES WE TESTED!

(West Coast van line)

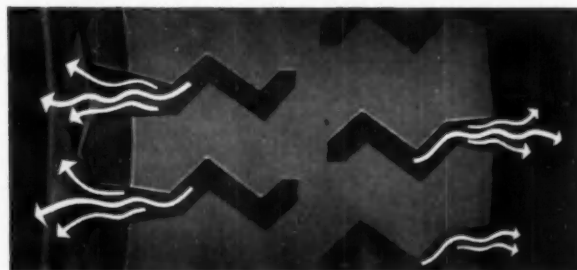
- 76% MORE ORIGINAL MILEAGE THAN ON FORMER HEAVY-TREAD TIRES!

(State of Washington heavy-hauler)

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Nonskid depth 60% greater than in any conventional highway truck tire. New, wider, flatter tread puts more rubber on the road—insures greater stability, and far longer service even on newest power-idler units!



Dissipates heat faster—The unique design of the Cross-Rib's tread and shoulders lets heat escape more quickly—and this new design—plus 3-T Nylon cord—keeps tire temperatures to a safe level.

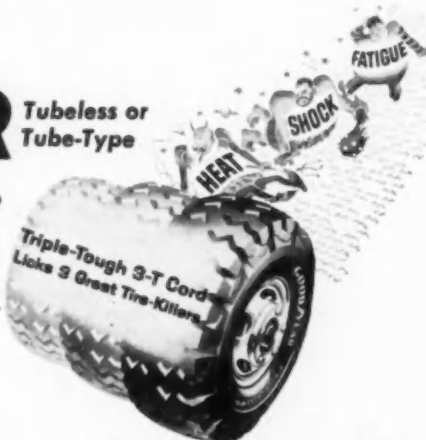
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DATES and DOINGS

JANUARY

- 6-10—Highway Research Board, Annual Meeting, Washington, D. C.
- 13-17—Society of Automotive Engineers, Annual Meeting and Engineering Display, Sheraton-Cadillac and Statler Hotels, Detroit, Mich.
- 14-15—Transportation Assn. of America, Annual Meeting, Sheraton-Park Hotel, Washington, D. C.
- 16-18—New Mexico Motor Carriers Assn., Annual Meeting, Hotel La Fonda, Santa Fe, N. M.
- 20-23—American Road Builders Assn., Annual Meeting, Sheraton-Park Hotel, Washington, D. C.
- 22-23—American Trucking Assn., Executive Committee, ATA Bldg., Washington, D. C.
- 26-30—Associated Equipment Distributors, Annual Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 30—Empire State Highway Transportation Assn., Annual Meeting, Hotel Statler, New York, N. Y.
- 30-31—Private Truck Council of America, Annual Meeting, Sheraton Hotel, Philadelphia, Pa.

FEBRUARY

- 3-5—Regular Common Carrier Conference, American Trucking Assn., Board of Governors Meeting, Roosevelt Hotel, New Orleans, La.
- 3-6—Annual National Auto Accessories of America Exposition, Navy Pier, Chicago, Ill.
- 9-12—California Trucking Assn., Annual Meeting, Hotel Biltmore, Los Angeles, Cal.
- 10-13—Associated General Contractors of America, Annual Convention, Dallas, Texas.
- 20-22—Louisiana Motor Transport Assn., Annual Meeting, Jung Hotel, New Orleans, La.

MARCH

- 12-15—Pacific Automotive Show, Pan Pacific Auditorium, Los Angeles, Cal.
- 20-22—Colorado Motor Carriers Assn., Annual Meeting, Hotel Broadmoor, Colorado Springs, Colo.

APRIL

- 13-16—Western Highway Institute, Annual Meeting, El Mirador Hotel, Palm Springs, Cal.
- 13-16—Customer Relations Council, American Trucking Assn., Balmoral Hotel, Miami Beach, Fla.
- 15—Transportation Assn. of America, Board Meeting, Hotel Statler, Washington, D. C.
- 16-19—Alabama Trucking Assn., Annual Meeting, Hotel Admiral Semmes, Mobile, Ala.
- 25-27—New Jersey Motor Truck Assn., Annual Meeting, Hotel Berkeley-Carteret, Asbury Park, N. J.

MAY

- 4-8—Terminal Operations Council, American Trucking Assn., Annual Meeting, Jung Hotel, New Orleans, La.
- 11-14—Automotive Engine Rebuilders Assn., Annual Meeting, Sheraton-Park Hotel, Washington, D. C.
- 12-14—Ohio Trucking Assn., Annual Meeting, Hotel Carter, Cleveland, Ohio.



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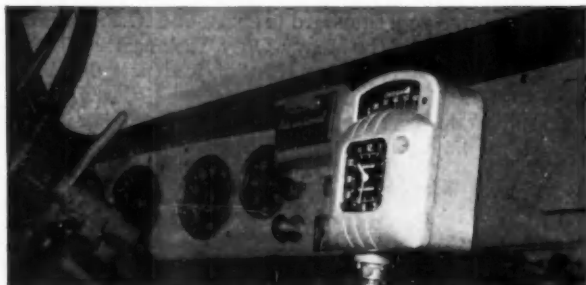
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NEW CHEVROLET

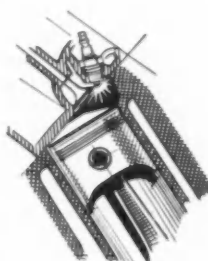


MEDIUM, AND HEAVY-DUTY HAULERS

ever—150 h.p.—and a host of new features that mean more economy and dependability on jobs that work a truck hard.

And Series 70 and 80 models come equipped with a big 175-h.p. Heavy-Duty Super Taskmaster V8 newly fitted out with a lineup of advanced, rugged components; this engine is designed to pull mammoth payloads with ease.

But that's not all! Series 90 and 100 models offer a new kind of big truck engine, the 230-h.p. Workmaster V8, with radical Wedge-Head design that develops high power and torque at fuel-saving low r.p.m. See your nearby Chevrolet dealer and save with Chevy's new brand of hustle! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



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Highway Fact Book

*from National Highway Users Conference
National Press Bldg., Washington, D. C.*

tells "The Highway Transportation Story . . . In Facts." With charts, graphs and a terse outline, the vital role motor vehicles and highways play in America's economic and social life is pointed out as a public relations tool for fleetmen. It helps the fleet operator in his individual PR program to dramatize the fact that highway transportation represents something personal to every person regardless of occupation.

Fuel Tax Study

*from Cummins Engine Co., Inc.
Columbus, Ind.*

is a report on how differential fuel tax legislation adversely affects trucking. "Why Motor Fuel Taxes Should Be Uniform" is a tool fleet operators can use in working with their state legislatures for an equalized tax set up. The booklet points out the inequalities and further asserts that the two-structure tax system—based on registration fees and uniform fuel taxes—is the fair method of taxing highway users.

Transit Fact Book

*from American Transit Assn.
292 Madison Ave., New York 17, N. Y.*

is the annual summary of basic data and trends in the U. S. transit industry. The 1957 edition was compiled by ATA's statistical department from material supplied by more than 85 per cent of the transit industry. It includes material on local motor bus lines, electric street railways, elevated and subway lines, interurban electric railways and trolley coach lines.

Many Roads to Glory

*from American Trucking Assns.
1424 16th St., N. W., Washington, D. C.*

The work performed by civilian and military trucks in warfare is documented in a new, illustrated booklet titled "Many Roads to Glory." The historical 32-page publication traces the impact of the development of motor transport on methods of warfare from the end of mass ground movement of foot soldiers in 1914 present defense needs.

Cranking Motor Manual

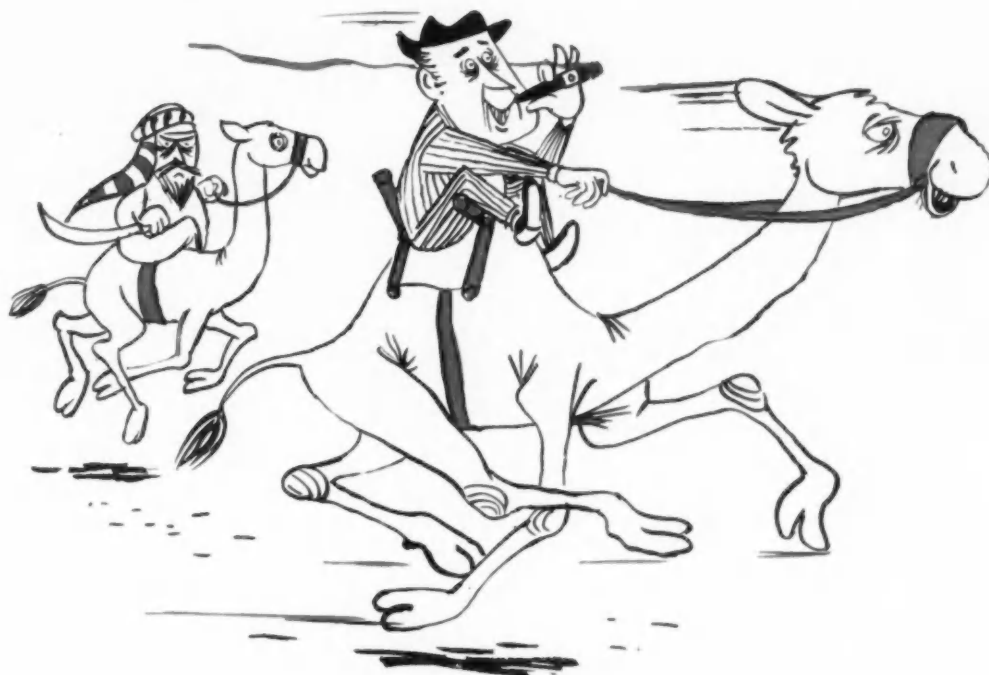
*from Delco-Remy Division
Anderson, Ind.*

is a guide for instructors who will teach mechanics principles of both cranking motors and series-parallel switches. After giving principles on cranking motors and motors in general, the manual discusses cranking motor circuits, Bendix drive, over-running clutch, Dyer shift drive, cranking motor solenoid circuits, periodic cranking motor maintenance, series-parallel circuits and no load and stall tests. To accompany the chart are training charts bound into sections bearing the same titles. Manual and charts are available at nominal cost.

Industrial Truck Handbook

*from Industrial Truck Assn.
Suite 526-28, Washington Loan & Trust Bldg.
Ninth and "F" Sts., Washington 4, D. C.*

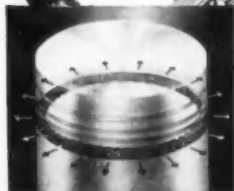
"Handbook of Powered Industrial Trucks" covers all types of powered industrial trucks. The book is divided into five sections covering selection, procedures and operation. A 20-page section is devoted to engineering data, claimed to be the most complete compendium of technical information on industrial trucks ever published.



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Are you getting the lower cost-per-mile now possible with today's great new nylon cord truck tires?

CHEMSTRAND[®] NYLON



197 First Avenue, Needham Heights, Mass.; 222 South Church Street, Charlotte, N.C. • PLANTS: CHEMSTRAND[®] NYLON—Pensacola, Fla.; ACRILAN[®] ACRYLIC FIBER—Decatur, Ala.

Only the heart of the steel ingot goes into Timken® bearings

(Another reason why TIMKEN® bearings are first choice with truck manufacturers)

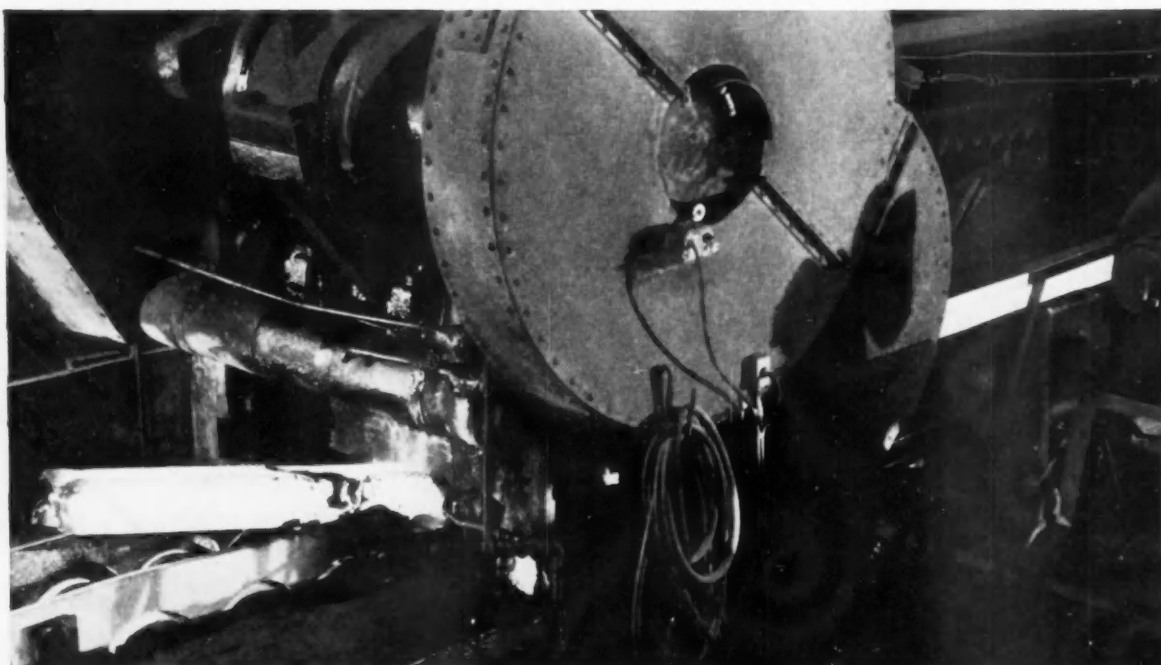
ONLY the best portion of a Timken steel ingot goes into Timken® bearings. We slice off over a fourth of the original ingot at the ends. That's because impurities and gas pockets can collect in the bloom ends in spite of the most exacting controls.

Using only the heart of the ingot is just one step we take to maintain steel quality. And we're America's only bearing manufacturer that makes its own steel. That's the only way we can be sure of getting steel

good enough for Timken tapered roller bearings.

Timken bearings are geometrically designed to roll true. And they're made to live up to their design, from the melt of steel to the finished product. That's why Timken bearings are first choice with the men who know trucks best—the manufacturers.

Do as they do. Always specify Timken bearings. They're *your* best bet for replacement. And for your free copy of "Timken Tapered Roller Bearings—Their Care and Maintenance", write Dept. JCC-12, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

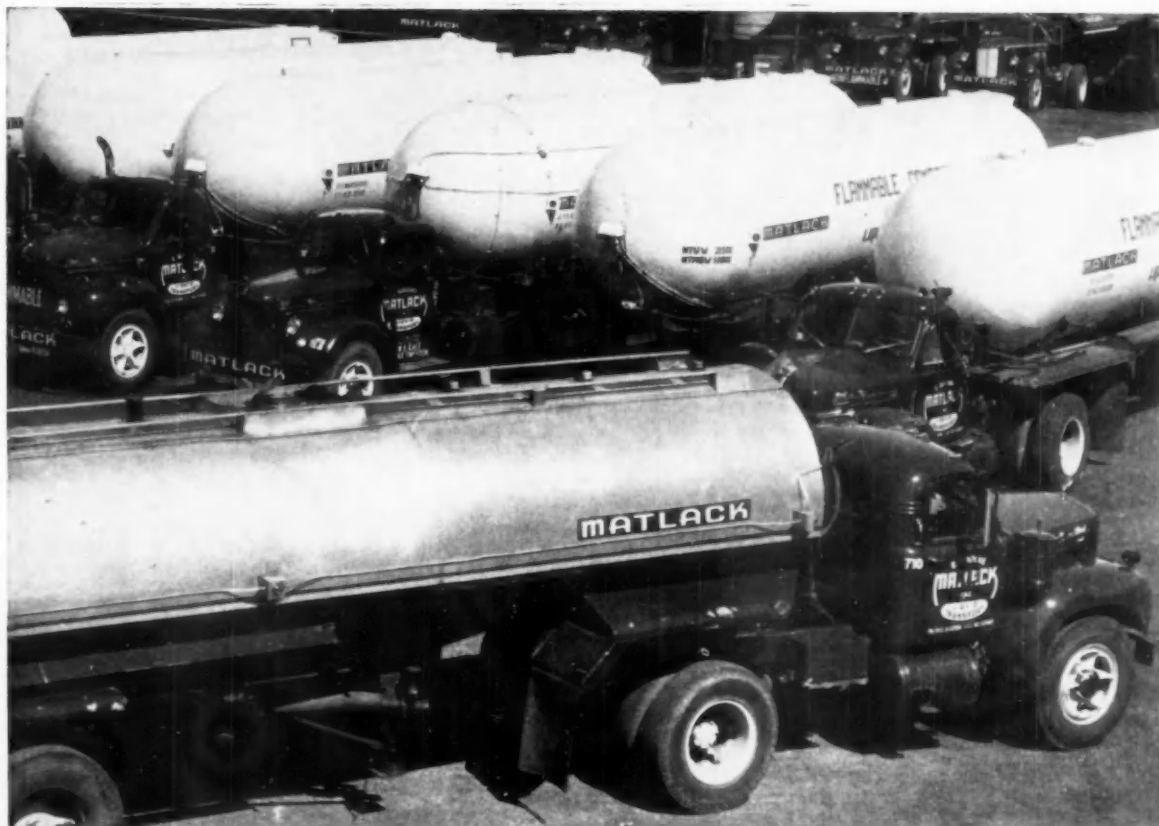


**SINCE THEY'RE BEST WHEN
THE TRUCK IS NEW, THEY'RE
BEST FOR REPLACEMENT, TOO!**



TIMKEN *TAPERED ROLLER BEARINGS ROLL THE LOAD*

TRADE-MARK REG. U. S. PAT. OFF.



OVER-ALL ECONOMY. With 850 vehicles, this company appreciates the extra miles per tire dollar they get with nylon cord.



TOUGH CARCASS of nylon cord tire takes a beating 24 hours a day year round, yet it gives extra mileage with up to three times more retreads than ordinary tires.



MORE MILES PER DOLLAR. More retreads, fewer tire failures, fewer road delays and fewer costly repairs have meant more miles per tire dollar for Matlack.

THIS TIRE MAINTENANCE ENGINEER SAYS:

"NYLON CORD TIRES CUT OUR TIRE INVENTORY IN HALF"

"Since we started using nylon cord tires, we've found that we need only half as many replacements. Nylon cord makes a tougher tire body, gives us more and better retreads. Now we get about 150,000 miles out of a tire.

"Last year we had over 6,000 nylon cord tires on the roads, taking the punishment of 30-ton loads hauled over all kinds of roads in all kinds of weather. We didn't have a single cord failure with nylon!" This performance record reported by Mr. C. R. Maurer, Tire Maintenance Engineer, E. Brooke Matlack, Inc., is another proof of the cost-cutting benefits nylon cord tires offer every fleet.

PROVE TO YOURSELF that the advantages of nylon cord tires add up to real savings under your road and load conditions. Ask your dealer about nylon cords today. Du Pont makes the tough, long-lasting nylon. Nylon cord tires are available from all tire makers.



REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY



**FOR TRUCKS AND PASSENGER CARS, TOO...
THE STRONGEST, SAFEST TIRES ARE MADE WITH NYLON CORD**

1957 New Truck Registrations

STATE AND MONTH	Brookway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Reo	Studebaker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama	Sept. 1	507	7	38	347	161	153	21	4		19	4	3	21	1,283
9 Mos.	1	5,143	33	394	3,757	1,247	1,134	358	19	22	220	31	49	113	12,523
Arizona	Sept. 64	575	2	64	363	104	123	2	4	5	6	15	28	1,091	7,162
9 Mos.		2,524	6	444	2,355	731	583	25	5	61	48	49	128	205	7,162
Arkansas	Sept. 446	1	50	466	87	148	6			11	2	2	4	7	1,230
9 Mos.		4,236	27	501	3,982	1,018	1,197	75		94	38	31	42	23	11,264
California	Sept. 3,042	9	513	2,864	421	592	27	6		56	44	49	88	414	8,125
9 Mos.	1	25,339	212	4,306	25,590	4,576	4,740	239	140	538	495	514	918	3,491	71,099
Colorado	Sept. 380	1	71	337	106	135	6	4		6	5	35	43	25	1,156
9 Mos.		3,024	19	494	3,041	829	1,035	97	27	74	61	222	368	141	9,452
Connecticut	Sept. 158	1	51	199	44	87	6	3		2	19	7	14	46	638
9 Mos.	14	1,561	47	410	1,578	389	794	192	31	42	195	80	165	272	5,750
Delaware	Sept. 62	8	9	34	9	23	3			1	7	1	1	4	162
9 Mos.	7	694	43	142	450	169	271	61	4	13	61	18	22	26	1,961
District of Columbia	Sept. 100		15	40	18	11	3					1	1	5	204
9 Mos.		758	3	70	463	137	186	42	12	3	18	8	43	63	1,806
Florida	Sept. 90	16	90	790	149	232	50	8		13	32	3	57	108	2,360
9 Mos.	1	7,129	79	921	6,984	1,393	1,737	430	97	159	309	239	518	682	20,691
Georgia	Sept. 832	7	64	789	153	180	36	4		7	15	5	9	16	2,117
9 Mos.		6,554	78	647	6,183	1,492	1,811	285	31	112	235	71	106	114	17,719
Idaho	Sept. 185		43	155	36	93	1			7	3	4	26	6	559
9 Mos.		1,536	2	366	1,323	472	622	17	3	89	17	45	241	77	4,810
Illinois	Sept. 963	27	150	943	181	470	36	7		17	29	10	25	70	2,928
9 Mos.		8,635	316	1,407	8,332	1,816	4,048	421	58	399	328	359	565	741	27,419
Indiana	Sept. 741	22	136	765	113	405	38	7		34	93	5	18	94	2,471
9 Mos.	1	5,613	139	1,119	5,846	1,174	2,697	247	82	355	498	62	160	342	18,335
Iowa	Sept. 428	11	59	450	61	240	13	1		3	13	11	11	28	1,318
9 Mos.		3,471	97	534	3,653	673	1,846	67	17	76	88	19	81	182	10,804
Kansas	Sept. 470	3	57	510	86	144	3			9	12	3	14	9	1,327
9 Mos.		3,755	37	402	3,784	659	1,144	33	16	100	107	31	117	65	10,249
Kentucky	Sept. 821		72	516	123	15	22			12	11	12	11	12	1,591
9 Mos.		4,264	22	539	3,739	1,087	1,188	101	21	75	102	90	143	79	11,402
Louisiana	Sept. 953	4	73	725	91	166	19			6	10	3	9	24	2,083
9 Mos.		7,033	41	629	5,627	1,005	1,398	152	37	74	86	66	86	114	16,348
Maine	Sept. 152		31	173	47	101	12			7	1	18	29	12	585
9 Mos.	2	1,130	5	251	1,145	369	767	83	2	54	38	110	222	89	4,273
Maryland	Sept. 4	351	1	49	259	49	135	16		3	22	2	9	11	913
9 Mos.	29	2,990	17	546	2,410	531	927	198	51	98	174	31	101	131	8,106
Massachusetts	Sept. 329	4	73	436	125	134	27	8		41	13	33	32	4	1,611
9 Mos.	30	2,443	46	864	3,038	762	1,306	220	27	47	287	129	354	387	9,740
Michigan	Sept. 1,088	9	240	1,253	241	241	12	8		11	12	23	46	58	3,242
9 Mos.		7,922	130	1,915	8,608	1,729	1,623	230	91	128	250	132	350	474	23,582
Minnesota	Sept. 429	6	57	553	104	219	18	1		22	7	5	21	22	1,464
9 Mos.		4,042	58	736	4,695	817	1,844	88	25	170	98	43	155	178	12,950
Mississippi	Sept. 665	2	44	461	114	215	12	1		8	4	7	5	5	1,543
9 Mos.		4,443	9	3,700	3,986	869	1,306	83	1	80	20	36	58	32	10,806
Missouri	Sept. 611	4	45	574	143	195	10	2		9	9	3	11	18	1,634
9 Mos.		6,675	38	650	5,098	1,497	1,900	116	24	121	309	55	74	172	16,727
Montana	Sept. 207	3	43	178	45	143	5			5	7	31	17	17	684
9 Mos.		1,650	7	304	1,463	395	922	51		85	37	79	303	110	5,405
Nebraska	Sept. 261	5	37	260	55	185	12			3	9	5	14	16	862
9 Mos.		2,262	57	255	2,131	480	1,143	89	4	47	104	50	86	92	6,800
Nevada	Sept. 840		17	50	77	15	36	2		1	2	2	2	8	1,611
9 Mos.		51	1	13	71	17	20	1		1	1	7	11	8	202
New Hampshire	Sept. 746	3	174	677	232	381	81	4		31	29	52	153	111	2,677
9 Mos.	12	464	12	103	522	149	200	53	5	5	37	15	26	71	1,674
New Jersey	Sept. 101	5,655	114	1,277	4,537	1,489	1,769	583	49	85	496	103	286	597	17,143
New Mexico	Sept. 443	1	43	237	83	75	14			5	16	15	7	941	7,447
9 Mos.		3,346	14	287	1,945	728	617	98	22	51	72	74	111	52	10,806
New York	Sept. 1,204	13	353	1,143	276	548	126	20	19	84	35	111	222	4	4,166
9 Mos.	201	9,802	161	3,136	9,164	2,615	4,657	974	264	240	895	405	1,076	1,588	35,178
North Carolina	Sept. 1,039	1	69	536	211	168	90			15	12	7	16	16	2,180
9 Mos.		6,650	54	707	4,831	1,316	1,393	572	13	114	253	76	117	117	16,213
North Dakota	Sept. 126		28	168	31	135	4			4			3	1	516
9 Mos.		1,154	1	232	1,339	244	911	4		39	4	9	29	23	3,989
Ohio	Sept. 818	136	227	1,115	192	396	59	12		18	37	27	46	74	3,048
9 Mos.	1	8,166	136	2,053	9,374	1,766	3,424	586	150	219	752	163	534	626	23,479
Oklahoma	Sept. 687		64	534	108	167	9			6	9	11	2	11	1,617
9 Mos.		5,010	10	408	4,333	909	1,297	99	39	69	140	37	73	198	12,533
Oregon	Sept. 326	4	72	350	85	138	10	3		17	7	13	51	62	1,138
9 Mos.		3,315	29	583	2,927	886	1,257	152	38	171	228	108	425	670	10,799
Pennsylvania	Sept. 1,072	21	301	1,012	271	649	149	11		39	55	48	101	119	3,988
9 Mos.	118	8,428	148	2,324	8,587	2,152	4,069	1,085	95	325	702	332	896	495	29,766
Rhode Island	Sept. 28		17	77	15	36	2			1	2	8	2	8	1,611
9 Mos.	1	815	13	120	573	124	235	74	16	2	64	29	22	75	2,162
South Carolina	Sept. 257	1	33	216	41	56	4			1	12	2	4	11	638
9 Mos.		2,872	2	306	2,407	437	508	98	1	29	70	29	52	65	6,876
South Dakota	Sept. 79	1	14	102	21	67	1			3		4	3	7	302
9 Mos.		1,067	11	207	1,120	305	925	19	4	29	5	49	110	41	3,892
Tennessee	Sept. 507	1	44	428	110	195	15			4	13	1	4	10	1,332
9 Mos.		4,584	29	571	3,928	1,023	1,324	213	7	56	341	34	91	82	12,281
Texas	Sept. 2,994	10	224	2,603	373	892	77			18	113	39	42	55	7,240
9 Mos.		23,170	139	1,886	18,974	3,035	4,971	689	40	269	998	266	329	322	55,088
Utah	Sept. 125	1	29	101	28	41	4			1	3	5	14	11	363
9 Mos.		1,326	22	276	1,222	333	516	36	8	40	41	36	138	145	4,139
Vermont	Sept. 40		12	75	8	27	2			4	1	15	14	6	204
9 Mos.	4	615	5	129	580	211	323	27	2	35	4	100	175	60	2,288
Virginia	Sept. 505	2	89	460	85	147	19	3		11	15	5	27	29	1,375
9 Mos.		4,851	9	1,098	4,198	1,379	317	36		148	216	107	264	182	13,388
Washington	Sept. 598	8	105	448	103	126	14	5		17	12	16	24	69	1,542
9 Mos.		3,814	63	690	3,182	954	1,128	132	20	124	100	85	248	518	11,056
West Virginia	Sept. 299		68	277	67	98	2	3		7	7	16	30	14	888
9 Mos.		2,355	12	505	2,192	681	726	52	22	104	96	179	297	96	7,317
Wisconsin	Sept. 401	1	63	423	86	198	6			7	21	8	32	55	1,304
9 Mos.		3,702	22	590	3,712	753	1,899	136	28	113	146	57	203	337	11,728
Wyoming	Sept. 126		13	116	38	76	5			1	2	29	4	29	416
9 Mos.		1,044	7	168	933	339	472	43	3	38	30	54	205	30	3,366
Total	September, 1957	58	27,380	240	4,173	5,275	9,213	1,072	143	461	898	555	1,166		

Special Armco Aluminum-Coated Steel helps truck bodies fight off rust



This refrigerated body is typical of the 320 units in General Ice Cream Division's fleet equipped with lower body panels and wheel houses made of Armco ALUMINIZED STEEL Type 2.

General Ice Cream Division of National Dairy Products Corporation has specified Armco ALUMINIZED STEEL® since 1945 for lower body panels and wheel housings of their trucks. The superior rust-resistance of this 2-in-1 metal is the reason.

In New England and New York State, where this fleet operates, corrosion resistance is especially important because ice-control chemicals are used on streets and highways at least four months a year.

Proved Corrosion Resistance

Before Armco ALUMINIZED STEEL Type 2 was produced commercially, it was tested for 15 years in a mild industrial atmosphere. These tests show that the aluminum coating on this special steel has more than three times the life of the standard zinc coating on unpainted commercial galvanized steel sheets in atmospheric exposure.

This added corrosion resistance can mean much longer life for truck body panels, roofs, or wheel housings made of this special hot-dip aluminum-coated steel. Costs of exterior

paint-maintenance stay low because paint adherence is excellent. Interior parts need not be painted at all when made of ALUMINIZED STEEL.

We'll be glad to send you complete information about the advantages of long-lasting Armco ALUMINIZED STEEL for truck body parts. Just fill in and mail the coupon.

ARMCO STEEL CORPORATION 2347 Curtis Street, Middletown, Ohio

- ☐ Send me detailed information about ALUMINIZED STEEL Type 2.
- ☐ I would like to discuss ALUMINIZED STEEL with an Armco representative.

NAME _____ TITLE _____

FIRM _____

STREET _____ CITY _____ ZONE _____ STATE _____

ARMCO STEEL CORPORATION

2347 CURTIS STREET, MIDDLETOWN, OHIO

SHEFFIELD DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



"SOLEX[®] reduces driver fatigue— adds comfort for passengers,"



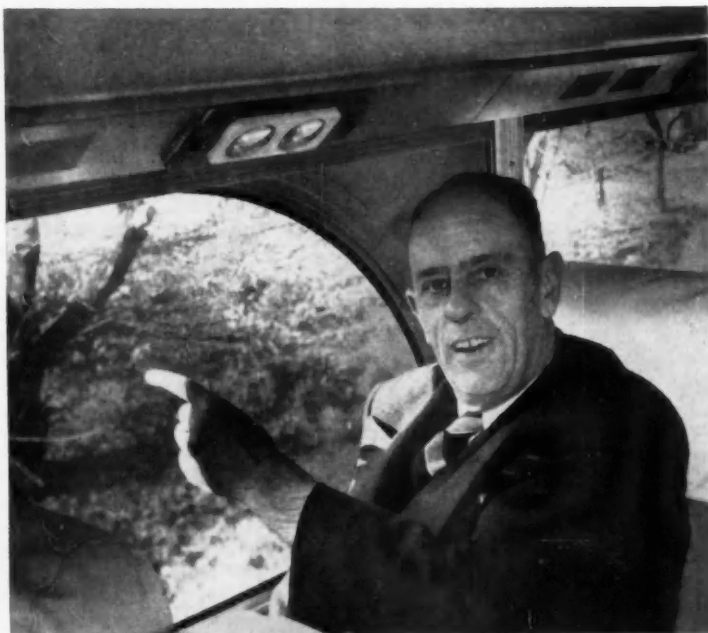
*says owner of
Chatham Coach Lines*

Standing in front of one of his buses is Mr. J. Ivan De Nure, owner of the Chatham Coach Lines, Chatham, Ontario, Canada. He frequently drives this bus himself, so he has first-hand information on SOLEX Safety Glass. Here's what he says about it: "SOLEX Glass reduces driver fatigue, adds comfort for passengers—the type of comfort that has resulted in a definite pick-up in business."

The passenger pictured here, Mr. T. M. S. Kingston, agrees with the owner's statement: "In this bus, I can read comfortably. I was never able to concentrate on reading in the past, because of the glare that came through the window. This tinted glass also cuts down the heat in the summer."

SOLEX Safety Glass reduces the amount of solar heat and glare entering buses. Therefore, it makes driving easier and safer . . . makes riding more comfortable. Specify SOLEX for new equipment and as a replacement in your present buses and trucks.

SOLEX is available in the well-known types of Pittsburgh Safety Glass—DUPLATE[®] and DUOLITE[®]—as well as in HERCULITE[®] and conventional plate glass. For more information, write to Pittsburgh Plate Glass Company, Room 7405, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.



SOLEX[®] "the best glass under the sun!"



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

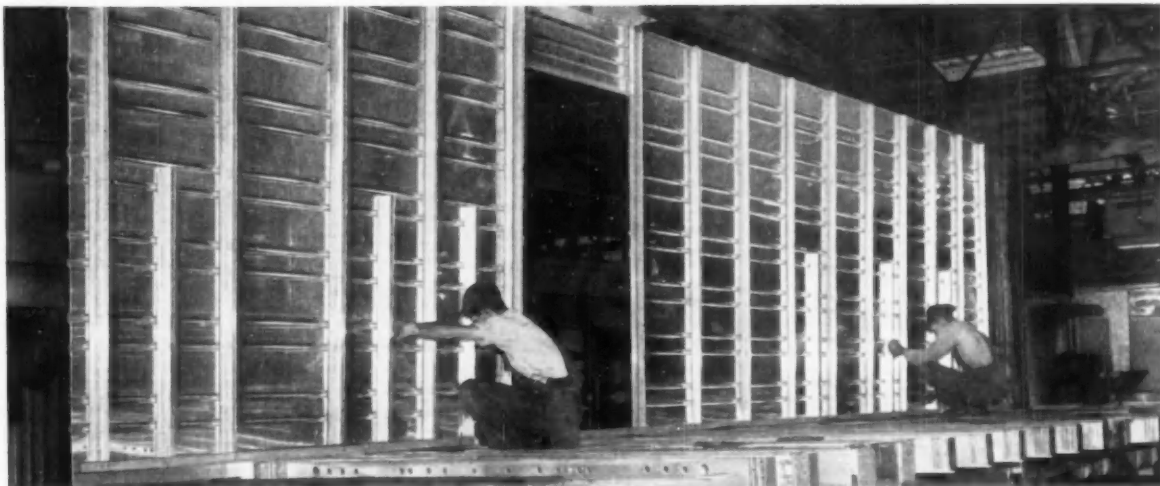
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



**"We're sold on
aluminum vans,"
reports
Akers Motor Lines**

"We bought our first aluminum trailer 11 years ago and it's still in regular use," reports Mr. W. H. Tomlin, Assistant to the General Manager and Superintendent of Equipment. "We've also equipped 100 of our rigs with aluminum wheels for additional weight reduction. Now, with 600 aluminum vans in our fleet, we haul more payload per trip, and we've boosted our earnings right along. We've found, too, that they're saving us money because they last longer and don't require as much maintenance. They stay new-looking without painting. We're sold on aluminum vans and have an order placed for more right now."



Alcoa Aluminum Makes the Big Difference

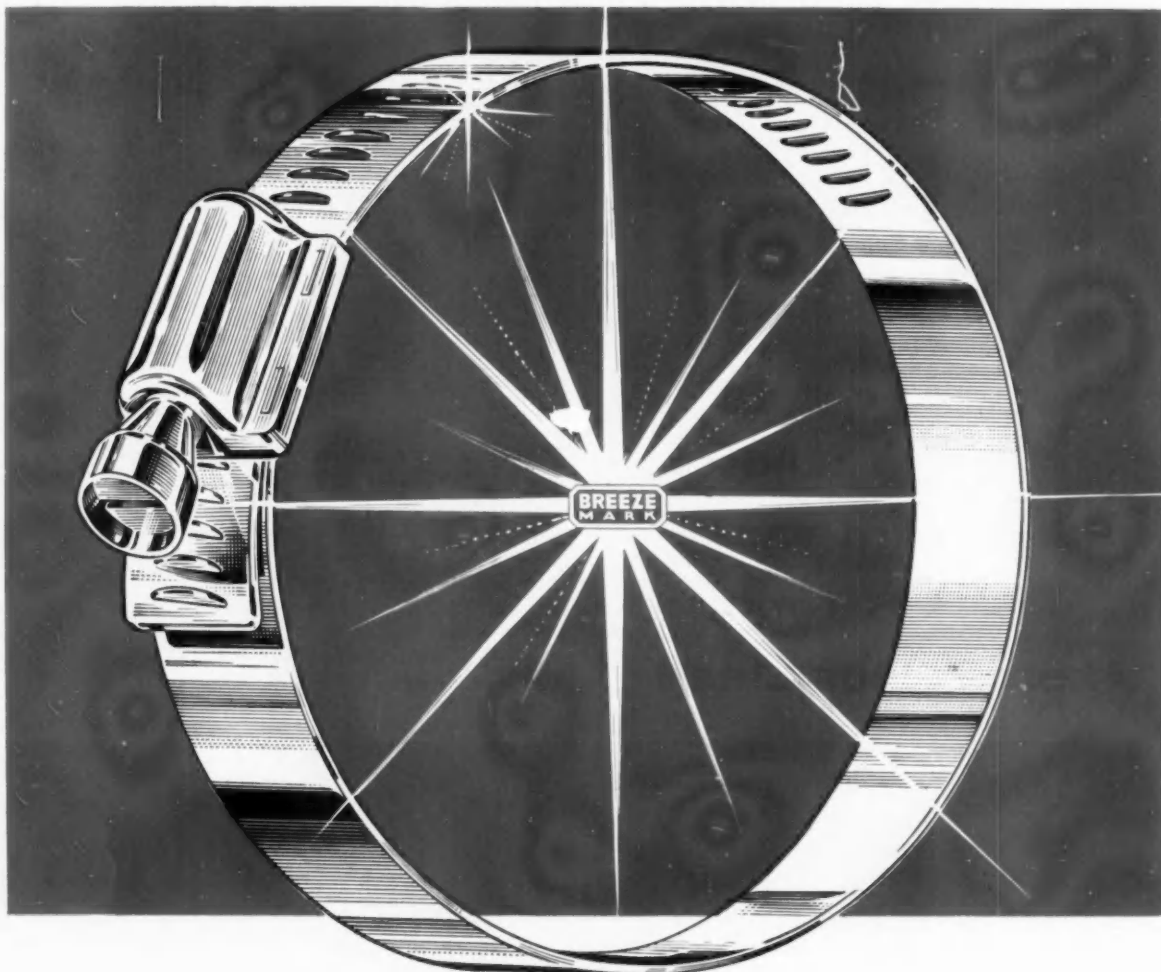
Your Guide to the Best
in Aluminum Value



NEW! "ALCOA THEATRE"
Exciting Adventure
Alternate Monday Evenings



Akers Motor Lines vans operate out of 29 terminals between Boston and Albany, Georgia, and average up to 75,000 miles each per year. Of the aluminum vans operating in this area, 224 are Great Dane Trailers. Great Dane builds with lightweight, high-strength Alcoa® Aluminum, the metal that helps keep deadweight at a minimum and payload at a maximum. Cost-conscious truckers everywhere find aluminum vans help cut operating expense. What Alcoa Aluminum is doing for others, it can do for you. Why not get all the facts? Write for your free copy of *The Road to Payload Profits*. ALUMINUM COMPANY OF AMERICA, 1876-M Alcoa Building, Pittsburgh 19, Pennsylvania.



Aero-Seal®

THE STAR OF HOSE CLAMPS

To profit by the sale or use of a good product, look to the *top* brand name for quality that never lets you down. In hose clamps, the *quality* name today as always is AERO-SEAL. We pioneered the famous precision worm gear and engineered the *extra strength* and holding power. Other clamps may LOOK like AERO-SEALS, but take a *second* look! Compare quality with price cuts and

special discounts. Which pays off best? Compare the worm gear construction. Note that AERO-SEAL worms don't wobble. Look at the special rugged interlocking feature that makes AERO-SEALS hold tight — no spot welding. Note the precision gear that applies uniform pressure — does not pinch hose. Stainless steel bands, complete size range. Ask your jobber!

Aero-Seal



For added quick-attach advantage, get AERO-SEAL Jets. Nothing like them!

REGULAR WORM GEAR HOSE CLAMPS

**Whatever the
cargo or job—
these fleets . . .**



Photo courtesy of Gerlinger
Carrier Co.



Photo courtesy of the White
Motor Co.

roll up steady profits with dependable



Photo courtesy of the Four
Wheel Drive Auto Co.

BLOOD BROTHERS Propeller Shafts

Here are fleets of three kinds . . . each specialized for its purpose. But all three have one advantage in common. They're all equipped with rugged, dependable Blood Brothers Propeller Shafts.

The reason is simple. Blood Brothers Propeller Shafts have proved they will deliver maximum engine torque smoothly—and give outstanding trouble-free service year-after-year.

Seldom requiring attention, they make a hit with profit-minded fleet owners. So—whether you build trucks or operate them—you can depend on Blood Brothers Propeller Shafts to help keep down-time *down* and fleet earnings *up*!

Write now for specific data—we'll gladly cooperate.



**BLOOD BROTHERS
MACHINE DIVISION**

ROCKWELL SPRING AND AXLE COMPANY
ALLEGAN, MICHIGAN

UNIVERSAL JOINTS
AND DRIVE LINE
ASSEMBLIES



Laugh it off!

1st Greasemonkey: "Say, Butch, I heard you've got your household set up like the U. S. Government. How's that?"

2nd Greasemonkey: "Yeah, yeah. my wife is the sekatory of the treasury, her mother is the sekatory of war, and my brother-in-law eats so much I call him sekatory of the interior—"

1st Greasemonkey: "And are you the president?"

2nd Greasemonkey: "No, I'm the taxpayer!"

ccj

State Trooper: "Going to a fire, Mac? Lemme see your operator's permit."

Reefer Driver: "No, just cruisin' within limits. At least I thought so, sir. Here, sir."

State Trooper: "What did you give me this paper for? It bears not the slightest resemblance to a driver's license."

Reefer Driver: "I'm havin' a little trouble findin' my operator's permit. So, while I'm lookin', I thought you might like somethin' to read."

ccj

PERSONNEL DIRECTOR: "HERE, HERE, MY GOOD MAN. WHAT IS A 5-B DRAFT CLASSIFICATION?"

JOB APPLICANT: "BIFOCALS, BRIDGEWORK, BALD HEAD, BAY WINDOW AND BUNIONS."

ccj

Ole Slush says: "My favorite racing form is a girl late for work."

A Texas oilman, barreling along the highway toward Dallas in his block-long convertible, screeched to a stop to pick up a hitchhiker, a truck driver who had run out of gasoline. Climbing in, the driver noticed a pair of thick-lensed glasses lying on the seat.

As the telephone poles began flying by in a blur, the truck driver grew more and more uneasy. "Beg pardon, mister," he finally ventured, "but don't you think you ought to wear your glasses while you're driving?"

"Shucks, son, don't let that bother you," drawled the Texan. "This here windshield is ground to my prescription!"

Cici Jay



"Pitiful sight! Just couldn't wait 'til we got back from lunch!"

STENO SUE: "I'M GOING TO QUIT THIS TRUCKING BUSINESS AND BECOME AN AIRLINE STEWARDESS. YOU MEET LOTS OF MEN THAT WAY."

STENO LOU: "YES, THAT'S TRUE. BUT THERE ARE OTHER JOBS WHERE YOU MEET LOTS OF MEN, TOO."

STENO SUES "UH HUH — BUT THEY'RE NOT STRAPPED DOWN."

ccj

Steno May: "Honey, if I were you, I'd see a psychiatrist. He should be able to do something about your emotional problems."

Steno Fay: "Oh, I dunno. I don't have much faith in those dome doctors."

Steno May: "I don't see why. I think they are the most! I used to be terribly conceited, then I went to a psychiatrist. He straightened me out fast, and now I have the most wonderful personality in the world."

ccj

The only type of holdup that never lacks witnesses is a strapless evening gown.

ccj

THE FORK LIFT OPERATOR, ON HIS DAY OFF, WAS SITTING ON THE BANK OF A RIVER FISHING WHEN A FRIEND CAME ALONG AND ASKED, "HOW ARE THE FISH TODAY?"

"I DON'T KNOW," ANSWERED THE FLO, "I'VE DROPPED THEM A LINE, BUT SO FAR THEY'VE MADE NO REPLY."

Resume Work



John Hart, Jr., (top) and John Hart, Sr., owners and operators of Jack and Jean's Bakery which serves parts of Idaho, Montana and Wyoming with a 50-vehicle fleet.

*"We're Getting Longer
Engine Life—Thanks to
Phillips 66
Heavy Duty Motor Oil!"*

—John Hart, Sr.,
President, Jack and Jean's Bakery
Idaho Falls, Idaho

● Prue (Red) Skelton, superintendent of maintenance, says: "Since switching to Phillips 66 Heavy Duty Motor Oil, we get 100,000 miles out of our trucks before major overhaul. And our trucks travel over rugged terrain in all kinds of weather."

Like Jack and Jean's Bakery, more and more fleet operators are switching to Phillips 66 products—for the extra protection, performance and service that mean extra profit for more trouble-free miles. Write or call your nearest Phillips office.



PHILLIPS PETROLEUM COMPANY, Bartlesville, Oklahoma

Sales Offices:

AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree St., N.W.
Station "C" P.O. Box 7313
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney St.
DES MOINES, IOWA—6th Floor, Hubbell Bldg.
HOUSTON, TEX.—6910 Fannin St.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.

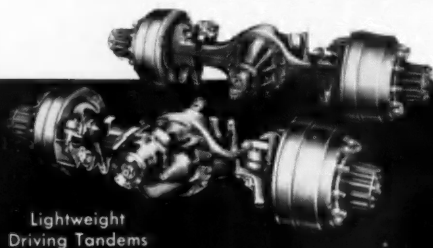
MINNEAPOLIS, MINN.—212 Sixth St. South
OMAHA, NEB.—6th Floor, WOW Bldg.
RALEIGH, N. C.—401 Oberlin Road
SALT LAKE CITY, UTAH—8B South Main
ST. LOUIS, MO.—4251 Lindell Blvd.
SPOKANE, WASH.—521 East Sprague
TAMPA, FLA.—3737 Neptune Street
TULSA, OKLA.—1708 Utica Square
WICHITA, KAN.—501 KFH Bldg.



PHILLIPS 66 HEAVY DUTY MOTOR OILS

For Today's Most Complete Line of Quality

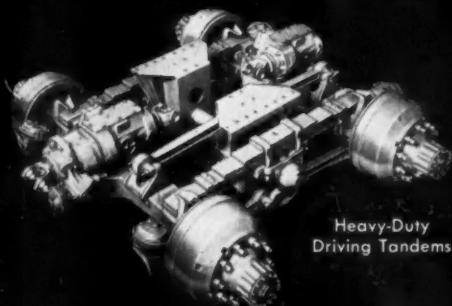
SPECIFY... TIMKEN-DETROIT®



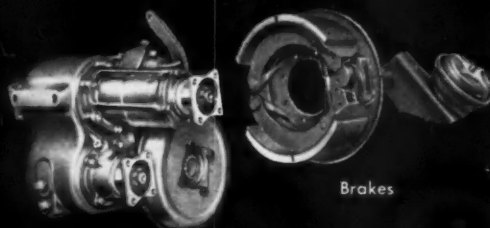
Lightweight
Driving Tandems



Trailer Axles



Heavy-Duty
Driving Tandems



Gear Boxes

Brakes



Single Driving Axles



Front Axles

Whether your requirements call for highway or off-the-road equipment—Timken-Detroit offers torture-tested axles and brakes proven by almost 50 years of field testing and laboratory research!

Timken-Detroit meets all your requirements for driving, trailer and front axles . . . brakes and gear boxes . . . with a complete range of capacities in each product category. Shown here are some of the units included in the complete line.

Nearly 50 years of manufacturing experience—plus continuing field and laboratory research—have taught Timken-Detroit the exacting needs of the trucking industry. Timken-Detroit Axles and Brakes are designed and built to give you the utmost in service, safety and dependability.

To you—this leadership in power transmission and braking systems means more productive road time, reduced operating costs and lower maintenance expense. Timken-Detroit Axles and Brakes are engineered to carry more payload . . . and stop more payload . . . at lower operating costs under all conditions.

The Timken-Detroit line of Medium and Heavy Duty Double-Reduction Tandems is an example of the superior engineering features and quality built into every Timken-Detroit product.

Plants at: Detroit, Michigan • Oshkosh, Wisconsin • Utica, New York
Ashtabula, Kenton and Newark, Ohio • New Castle, Pennsylvania



Axle
Product
of

Timken

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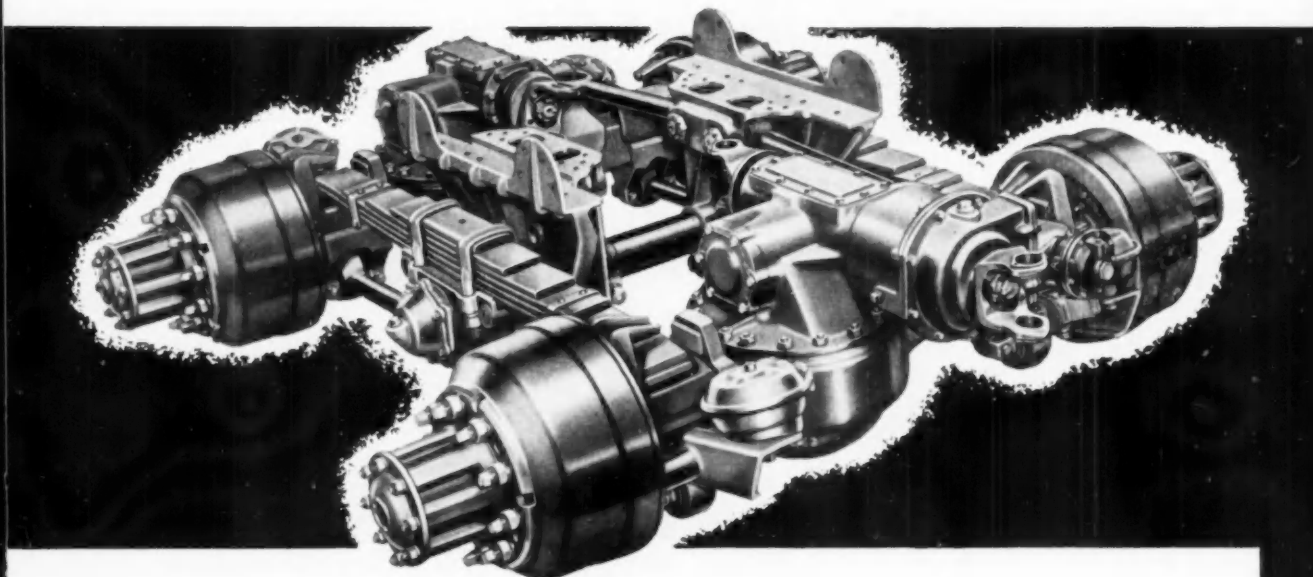
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Axles and Brakes for Commercial Vehicles

Products
of **Rockwell Spring and Axle Co.**



**Timken-Detroit Heavy-Duty Double-Reduction Tandems
Give You Payload Leadership!**

Ability to take the toughest going and still deliver the load on time has helped make these rugged tandems the number one choice with operators of heavy-duty vehicles. These tandems give you the big advantages of long trouble-free service, economical performance and utmost dependability.

Here are a few of the features developed in famous Timken-Detroit Tandem Drive Units—

"Cradle Ride" Suspension... free ends of long, resilient springs float in axle spring guide brackets. This permits axles to articulate freely, adjusting themselves to road irregularities. Floating springs cradle the vehicle, materially reducing road shock and eliminating source of vehicle flutter. "Cradle Ride" suspension

stabilizes the load, permits easy, restful driving... improves driver control and safety. Driving and braking forces are transmitted only through torque rods.

Hypoid Gears with their larger pinions and greater tooth contact give you outstanding performance, top efficiency and long life—plus lower maintenance costs.

Inter-Axle Differential divides torque evenly between axles... yet permits wheels of one axle to turn faster or slower than wheels of the other axle. This means both axles are always doing equal amounts of work. Driving parts and tires last longer. Controlled from the cab, differential can be locked out at any speed to give positive through drive.

Rectangular Shaped Axle Housings are forged from high carbon steel. This

rectangular shape, combined with full strength corner sections, provides the greatest strength possible with minimum weight and size.

Famous Torsion Flow Axle Shafts are made even stronger through the use of more splines and greater root and body diameter.

Dependable Heavy Duty "P" Series Air Brakes with unit-mounted design make a compact self-contained assembly. Temperatures are lower and liner life is longer because of open type spiders. Tapered "Econo-liners" provide greatest thickness in area of greatest wear.

Unequaled parts interchangeability gives you more time on the road—reduces parts inventory—speeds service. Parts are standard items readily available.

©1957, RS&A Company

WORLD'S LARGEST MANUFACTURER OF AXLES FOR TRUCKS, BUSES AND TRAILERS

CCJ BULLETIN BOARD



TRANQUILIZERS AND YOU

Heard about the Texan who asked his doctor to stop treating him with tranquilizers?

"Doc," said Tex, "they're just too powerful. When folks say nasty things about Texas I just don't care!"

Anything as powerful as that has to be watched. So if you're taking tranquilizers you'd better check with your doctor about how they'll affect your driving. They could cause you trouble.

The medics still have a lot to learn about the pills' effect. Main purpose of tranquilizers, however, is to relieve tension. But, to drive safely you need a certain tenseness. You can't afford not to care. When you're care-free you can't be careful. And that could earn you a trip from Miltown to Deadsville.

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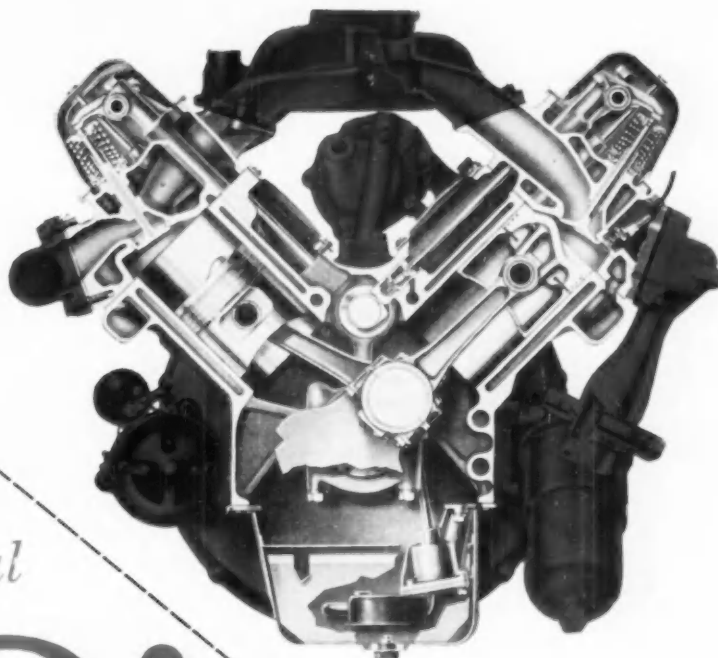
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New International

V-8's

Built to stay on the job longer!

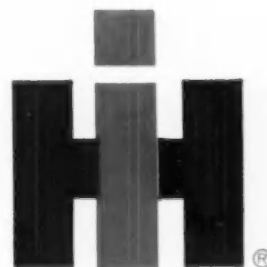
INTERNATIONAL heavy-duty V-8 engines stay on the job long after high stress modified engines have failed to satisfy.

The big difference: INTERNATIONAL V-8's are *built* specifically for rugged, continuous truck operations—and they've proved it since introduction a year ago. Every part, from the heads to the pan, has built-in reserve life. For example: there are exclusive long-life "wet" replaceable exhaust valve guides, fully machined and high efficiency combustion chambers, Y-shaped, deep skirted, rigidly constructed special alloy cylinder block, and many other endurance features that also keep running costs low.

When you buy trucks to make a profit, your logical choice is an INTERNATIONAL, the heavy-duty favorite for the past 25 straight years because they are *built* to stay on the job longer.



They GO on the job! They stay on the job! V-8 powered INTERNATIONALS are available with 206, 226, 257 hp. engines—most powerful, most economical you can get. Models from 24,000 lbs. GVW to 76,800 lbs. GCW.



International Harvester Company, Chicago
Motor Trucks • Crawler Tractors
Construction Equipment • McCormick®
Farm Equipment and Farmall® Tractors

International Trucks cost least to own!

Set for the Long Run!



In the long run a new set of ACs save many times their cost in gasoline!

When heavy haulers set off on long-mileage, cross-country runs, new AC Spark Plugs pay for themselves in a hurry. That's when the extra efficiency of AC Hot Tips pays off in an important way.

Drivers from coast to coast are passing the word—"Hot Tip ACs stay clean longer." The exclusive Hot Tip feature gives AC plugs anti-fouling action, burns off combustion deposits as soon as they form. It helps keep plugs clean, and makes an important difference in gas mileage figures, too.

Put a new set of Hot Tips in your trucks, and start saving now.



AC  THE ELECTRONICS DIVISION OF GENERAL MOTORS

Watch Walt Disney Studios' ZORRO weekly on ABC-TV

ACTION starts with



**HOT TIP
SPARK PLUGS**

Introducing the new . . .

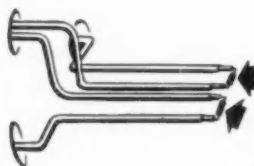


All-Glass

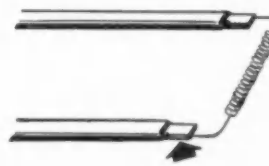
C.I.M. Floodlamp

for Construction and Industrial Machinery

LONGER SERVICE LIFE—New C.I.M. Floodlamp is designed for rough duty on such equipment as bulldozers, graders, scrapers, crawlers and other road-building, mining and construction machinery.



G-E's new C.I.M. Floodlamp features two single coil filaments in series, instead of one. They are shorter, so they have extra strength. Available in 12 and 24-volt.



The sturdy filaments in these new floodlamps are not welded to the lead-in wires. Instead, they are clamped in a vise-like grip for added resistance to breakage.

BEAM DESIGNED TO FIT THE JOB — Lens-reflector combination is designed to give a broader beam spread—vertically and horizontally. You get more light right where you want it.



Vertically, the beam gives more light to illuminate the entire work area.



Horizontally, the beam pattern is smooth . . . you get a more even distribution of light around the machines.

DOES NOT GROW DIM — G-E C.I.M. Floodlamps are all glass, one-piece units . . . so air, dirt and moisture can't get in. Reflectors never need cleaning.



Glass Reflector Fused to Glass Lens

And because these lamps have a hard glass reflector fused to a hard glass lens, they won't crack from splattering by rain or snow.



G-E C.I.M. Floodlamps have no inner bulb to blacken; the whole unit is a bulb. No gaskets to leak, filaments stay in focus.



SPECIFICATIONS FOR G-E C.I.M. FLOODLAMPS
(PAR-46 Bulbs—2 contact lugs)

G-E No.	Circuit Volts	Watts	Bulb Dia.	Designed Life
4078	6	50	5 3/4"	500 hours
4478	12	60	5 3/4"	500 hours
4578	24	60	5 3/4"	500 hours

For best results, lamps should be used in shock-mounted housings. General Electric makes a full

line of all-glass sealed beam lamps for construction and industrial machinery. For more information, contact your nearby G-E Lamp Distributor or write: General Electric Co., Miniature Lamp Dept. CCJ-12-7, Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL  ELECTRIC



You save TWICE with a Plymouth fleet

Coming or going, Plymouth means money in the bank!

When you get right down to it, there are just two big questions in every fleet buyer's mind. What's it going to cost to run, and what's it going to bring when it's sold?

Plymouth has the answers that pay off!

1 Economy. The kind of thrifty operation that made Plymouth winner hands down of the Mobilgas Economy Run is the kind you'll get... no matter which of the five great engines you choose for your fleet. Plymouth, using a V-8 with TorqueFlite automatic transmission, beat even 6's in its class in the Economy Run!

2 Resale. Plymouth, years ahead to start with, naturally has more to offer when it's time for resale. That's why 1957 Plymouths, just entering the used car market, are bringing the highest prices of the "low-price 3."

Pride means profits, too. You'll boost your staff morale with the style and prestige of a Plymouth fleet. Your employees will get a lift when they take the wheel of a Flight-Sweep Plymouth with its long, low lines. They'll look forward to a day with restful Torsion-Aire Ride in the Star of the Forward Look. From start to finish, as your Plymouth dealer can explain...

There's no catching **Plymouth** *...ahead for keeps*

IT'S HERE!

REYCO®

.....THE ANSWER
TO INFLATION-
THE NEW "30" SERIES

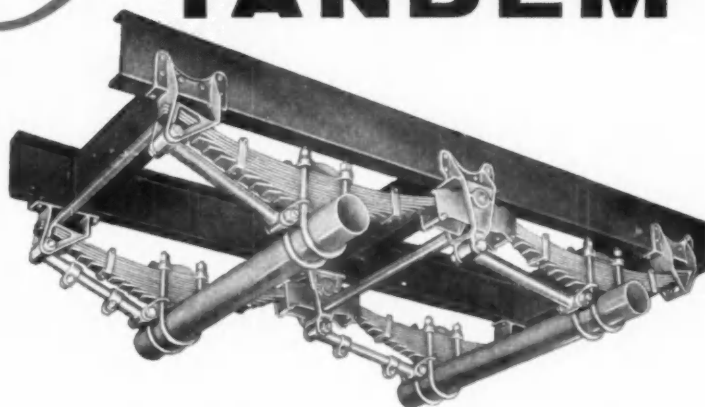
Champion
TANDEM

**LIGHTEST
WEIGHT**

**LOWEST
PRICE**

**Greater Payloads
For You**

ACTUAL WEIGHT
AS LOW AS 678 LBS.



CHECK THESE ADVANTAGES:

- ✓ Sturdy cast steel construction
- ✓ New pre-assembly features drastically reduce installation cost
- ✓ Lowest mounting height for hi-cube trailers (13 inches)
- ✓ Same Reyco guarantee--no time limit

NATION-WIDE SALES & SERVICE

REYCO®

T-457

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REYNOLDS MANUFACTURING CO.

SPRINGFIELD, MISSOURI

TWO LAMP HEADLIGHT SYSTEM

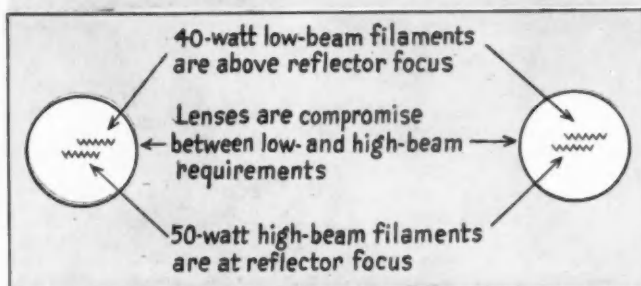


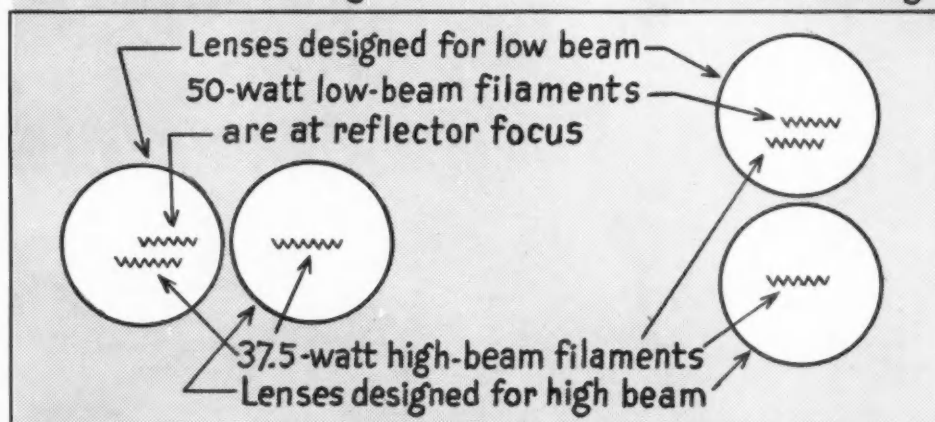
FIG. 1, left, shows arrangement of filaments and wattage of two headlight system. Note how focus compares with . . .

FIG. 2, below, which shows filament details and wattage of four headlight arrangement. High beam total is 150 watts

FOUR LAMP HEADLIGHT SYSTEM

Horizontal Mounting

Vertical Mounting



Aim ^{Dual} Headlights With Care

Most 1958 models—cars and trucks—

sport four "eyes" instead of a pair.

New headlights give more road light

FOUR EYES used to be the name given guys who wore glasses. Now it applies almost across-the-board to the new 1958 vehicles. Shown here are "eyes front" views of fleet passenger car and truck models announced so far.

Big advantage is more light on the highway—150 watts on high beam as compared to 100 watts with



Vertical Ce
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25 feet

2

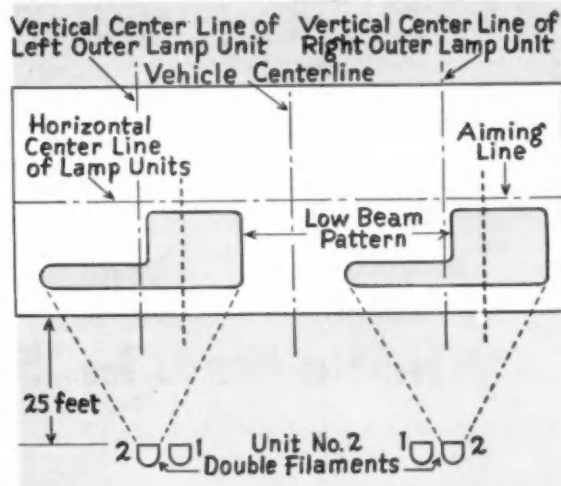
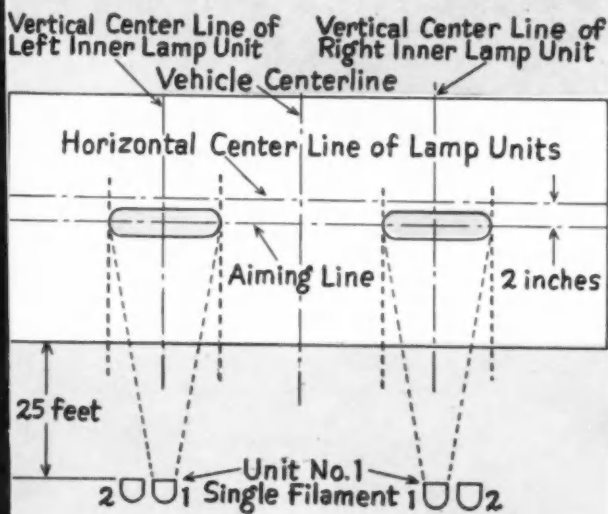
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marked

- No beam l
- No beam, beam i

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FIG. 3, below, shows aiming pattern for the No. 1 or inside pair of lamps. They are 37.5-watt lamps with single filament high beam in focus

FIG. 4, right, shows aiming pattern for the No. 2 or outside pair of lamps. They have both 50-watt low beam and 37.5-watt high beam filaments



light in focus supplemented by the slightly out-of-focus high beam filament of No. 2 lamp.

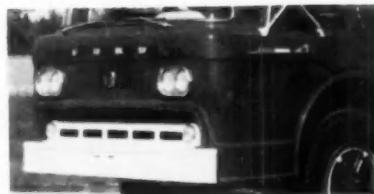
No. 1 inside and No. 2 outside is the usual mounting, will be considered standard in this discussion on dual headlight aiming. Only car announced so far that differs is the Lincoln. If your fleet sports one of these, the lower lamp is the single filament, high beam No. 1. Upper lamp (TURN TO PAGE 136, PLEASE)

two headlights. Present two-headlight systems (Fig. 1) also are a compromise as far as focus is concerned. New four-headlight system (Fig. 2) uses two different sealed-beam lamps. You'll find them marked No. 1 and No. 2.

- No. 1 lamps are single filament, 37.5-watt, high beam lamps in correct focus.

- No. 2 lamps are double filament, 50-watt low beam, and 37.5-watt high beam lamps with the low beam in focus.

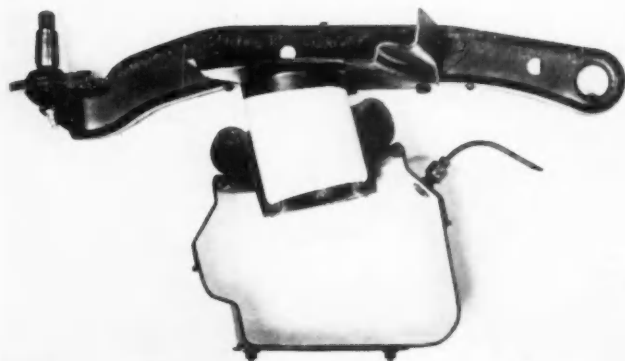
Thus in use, the outside (No. 2) lamp gives an in-focus low beam. When the high beam is flicked on, the No. 1 lamp on the inside gives high beam



Mechanically Speaking . . .

What's New in '58 Passenger Cars

Easier maintenance engines, non-slip differentials, air suspension are featured



GM air suspension is like a piston. Upper half connects to body, lower half to frame. Air is compressed between to give "spring"

Air suspension components include air compressor, reserve tank. On Buick, compressor and power steering pump have common driveshaft



MECHANICAL improvements on the 1958 passenger cars center around . . .

- Engines designed for easier maintenance.
- Non-slip differentials for better traction.
- Air suspension for an easier ride.

Ford and GM offer air suspension—as an option—on all cars. Chrysler is sticking by its "Torsion Aire" suspension successfully introduced last year. Cost of air springs adds about \$125 at retail to the car's cost, will probably be less when purchased on a fleet basis.

COMMERCIAL CAR JOURNAL has test driven a number of fleet cars equipped with air suspension, can say that the ride is definitely improved. Biggest advantage to fleet operators, however, is in the self-leveling feature.

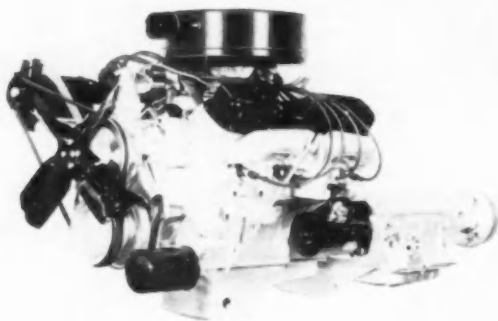
Fleet passenger cars—more than any other—are often subject to heavy loads such as salesman's literature and samples. On 1957 models with extended overhang in the rear, a heavy trunk load could cause real trouble. Air suspension automatically keeps the car level—regardless of the load's weight or location.

While differing in details, air suspension systems are basically the same. Components include fan belt-driven air compressor, reserve pressure tank, air bellows with automatic leveling valves at each of the four wheels.

Maintenance includes draining moisture



Ford's new V-8 engine has service accessibility. Note new position of distributor coil, fuel pump, oil filter and spark plugs. Chrysler's engine, below, is also improved. Note location of oil filter and distributor



from reservoir tanks every 1000 to 2000 miles. If you don't, the leveling valves are likely to get fouled-up or in cold weather—freeze shut. Also keep the air intake and leveling valves clean.

If the system fails, running gear ground clearance can cause problems. You may have to take off a pair of wheels to tow the car. Also there may not be enough clearance to run it onto a hoist.

What to do with a flat tire? Even with the engine stopped, the automatic valves will try to level the car as it's jacked-up. To prevent problems here, cut off the system before you jack.

Ford's automatic valves work only when the car door with the courtesy light switch is opened. Switch actuates a solenoid that operates the valves. On some other makes, there is a special cut-off switch, on others about the only thing that can be done is to disconnect the battery.

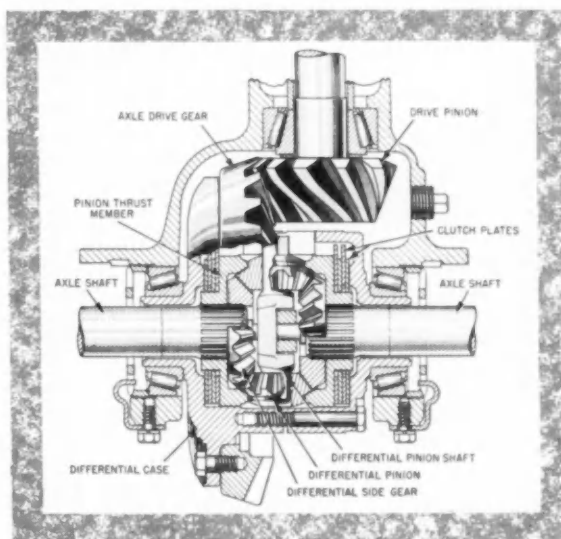
Location of the air compressor

crowds the engine compartment a little. To save space, Buick operates both the air compressor and the power steering pump off the same fan belt-driven drive shaft. Chevrolet combines the generator and compressor drives on the same shaft.

Engine service accessibility has been given emphasis on Ford's new V-8 engine. Looking at the accompanying photograph, you can easily see new position of distributor coil, fuel pump, oil filter and spark plug. By-and-large, they are now out in the open and readily accessible. Chrysler's line is also improved in this respect, though spark plugs still present a problem.

The non-slip differential, pioneered by Studebaker, is now optional equipment on Studebaker-Packard, Ford, Chrysler and GMC fleet cars. Its advantage is that it supplies most power to the wheel with the best traction.

(TURN TO PAGE 180, PLEASE)



Studebaker-pioneered and now generally available, non-slip differential incorporates two centrifugal clutches

Chevrolet and Pontiac use new "X" frame that eliminates conventional side rails and permits lower floor height



By **L. E. (Happy) Hall**, General Superintendent
Nashville Transit Co. Nashville Tenn.

NASHVILLE TRANSIT moved into new quarters last March. Within three weeks we reduced our maintenance staff by 10, from 81 to 71, thanks to increased efficiency.

Our former shop was in the old (built in 1906) car barns we had inherited from the trolley company. The new location has 10 per cent less area, the shops occupy 40 per cent less space, yet shop capacity is 20 per cent greater. The answer, of course, is that we've centralized all maintenance work for our 174 coaches in a layout designed for the greatest possible efficiency.

It was wonderful to start from scratch, limited only by the physical characteristics of the property. The only building already here was a large warehouse. This is now our main shop, body shop and main parts department as shown in the plan above. All other construction is new, including additions to the former warehouse.

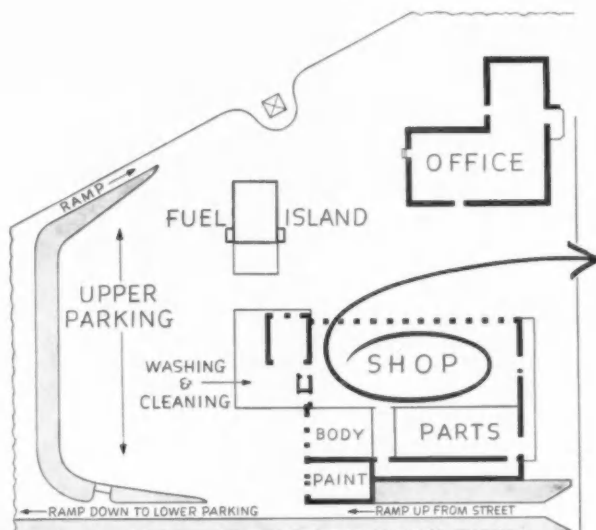
We tailored the property's considerable slope by dividing the bus parking area into two level lots with a steep bank between and ramps in and out. The farther, lower lot holds our newest buses, most of which are stored only at night. The closer lot is for old buses. Used only in rush hours, they are kept handier to the hostler's station.

Incoming buses enter the first lane at the edge of the property. It leads directly to the parking lots. Outgoing buses exit from the opposite side of the parking lots to a "ready area." This is above the general offices and opens directly onto the street. Thus the normal flow of traffic is in a "U" around the perimeter. Incoming swingshift drivers can leave their receipts in a depository behind the hostlers' office on their way to the drivers' quarters.

Our shops are now completely self-contained. The old barns were split up by a busy downtown street. Each time a bus was moved an extra man had to step out and hold up traffic. Now our mechanics move the buses in from the service line and out to the parking lot, or from bay to bay, with no trouble.

By routing normal traffic around the property there is no crisscrossing. The service parking lot extends from the street for the length of the maintenance building and faces the roll doors of the 11 service bays. Before the start of a bus's last run prior to servicing, the "barn card" is put in its window to advise the driver to pull into service area.

There is little traffic at our end of the street. Peabody St. in front of the



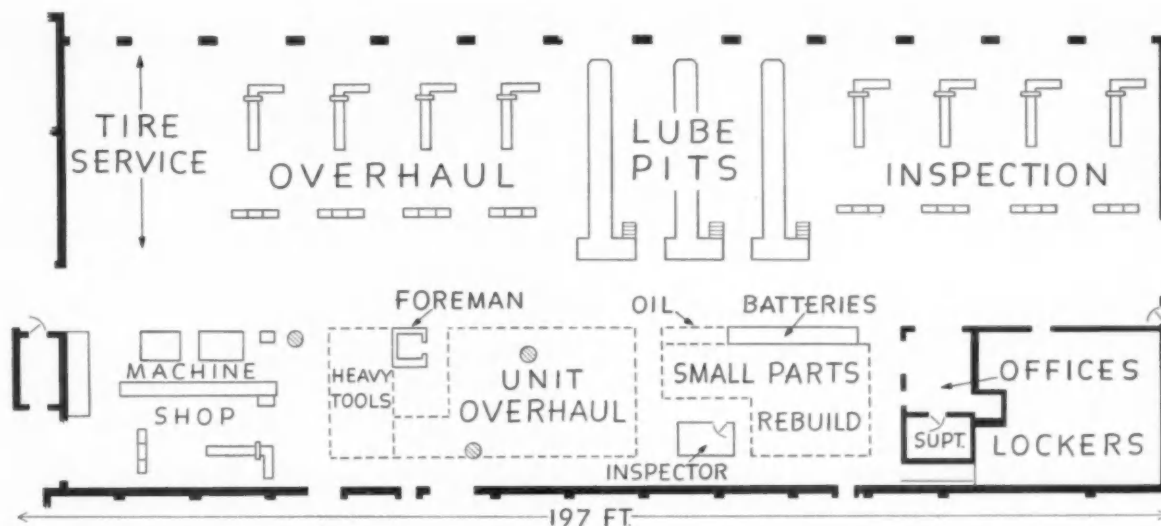
At Nashville Transit

NEW SHOP

Smaller and more compact,

Repair benches are self-contained, have long-boomed hoist within easy reach. Shop office is shown in background





At left is overall plan of Nashville Transit's new property. Main shop is shown in detail above. Lower parking lot is for newer frequently used buses. Shop is planned for minimum interference among departments and for "unit" repair and rebuilding program. Compact plan boosts productivity.

BOOSTS EFFICIENCY

its design cuts waste time and motion

property is dead end at the river. Opposite us are shops for City of Nashville vehicles. Back of our pie-shaped property is the river at the bottom of a steep bluff. At the other side, Crocket St. dead-ends in a parking lot leased for employees' cars. Main highway to midtown is one long block away, with the crossing controlled by a traffic light.

Our one big sacrifice in making this change has been moving farther from the shelter terminal. The car barns were four blocks from the shelter. The new facility is 16 blocks away. We've added 60,000 dead-head miles annually, and 10 minutes more time per man for each of 260 runs daily. (We couldn't rebuild at the old spot because the new highway program displaced us.)

The whole property was built and is owned by the Nashville Transit Authority. It is leased to the bus company. The land cost \$900,000, and construction, paving and landscaping amounted to another \$1,100,000. The latter was higher than the original estimate, so we cut some things out that we originally planned. Greatest casualty was a separate tire shop

to be set beyond the wash rack. Instead, we eliminated one grease pit in the service bays, moved the twin-post hoists all down one slot, and set the tire shop at the end of the service bays.

Pulling all the NTC shops together enabled us to set up a "unit" system for repairing and rebuilding parts. Work on all parts repair was divided into seven groups of one or more men. While we tried to put various parts in natural groups, they were also adjusted to give each unit a normally balanced workload.

Each unit is supplied with workbenches, hoists, heavy tools or whatever they need for efficient operation. Each workbench has compressed air, water, electricity or gas wherever needed.

This unit set-up has made it possible to budget parts rebuilding. In their weekly meeting, the maintenance supervisors decide what each unit should process during the following week. This list is prepared by the foreman. It is usually accepted without

(TURN TO NEXT PAGE, PLEASE)

At Nashville Transit

Continued from Page 71

Well-equipped, dust-free diesel injector service room has an exhaust fan and filtered air intake

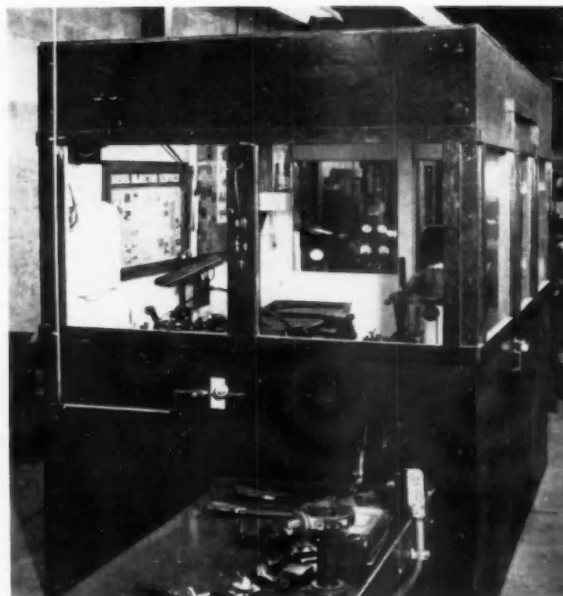
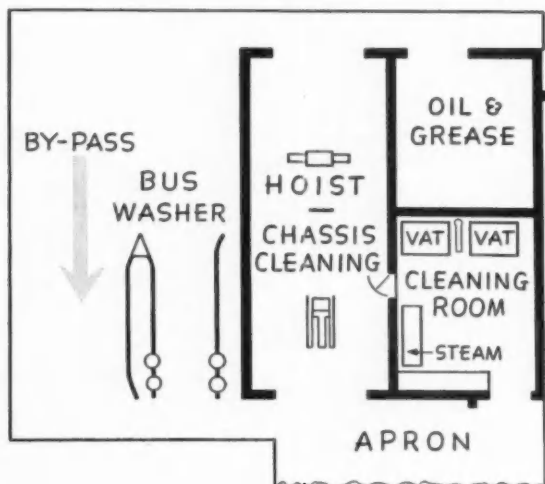
change. However, in this review there is a chance to bring out new conditions that might change the needs during a given week.

This budgeting avoids having a dozen extra fareboxes being re-built while the parts department runs out of heater replacements. Automatic quotas for each unit are impractical because the supply of worn parts varies.

Re-built parts are kept in the "night parts room." This section of the stock room is separated from the new stock by a floor-to-ceiling heavy wire partition. It remains open to the night crew when the parts department is closed. All parts can be taken from it without requisition, since they've already been charged to the shop originally. When the supply of re-built parts is exhausted, it is supplied for current needs from the new parts stock.

New parts are drawn by requisition. A recent change has been to have requisitions made out by the foreman. This precludes a mechanic's making out an excessive requisition and presenting it for hasty signature when the foreman is busy.

After fueling buses can be run through washer or can by-pass it to go out on their routes



By organizing our rebuilding units and setting budgets we acquired a comfortable stock of re-built replacement parts. Piles of worn parts are virtually eliminated. Now the sight of a discarded part under a bench, in a corner or in the junk bin is cause for instant questioning by C. B. Sharder, our maintenance superintendent, or Charley Bridges, our general foreman.

New parts are also being conserved as a result of moving to new quarters. New parts control has been shifted from the accounting department to the maintenance department to bring purchasing one step closer to needs. The purchasing agent sits in on all maintenance supervisory meetings. He is party to maintenance problems and to setting up maintenance policies. Thus he is self-informed of all changes affecting purchases at the time they are decided upon.

By keeping current with purchases, and by using re-built parts efficiently, we hope to reduce new parts inventory by \$50,000. In a small bus operation that "ain't hay"!

Deliveries of parts and supplies are made at the shop loading dock right off Peabody St. without mixing in bus traffic on the property. Our trouble trucks, as well as salesmen and visitors, also park there handy to the shop yet out of the way. Visitors to the general offices have head-in parking in front of the office building. Executives and company cars are parked in an angle behind the general offices.

The purchasing agent and receiving clerk have offices right at the loading dock. Deliveries are received directly into a corner of the parts department, virtually in front of the receiving clerk's desk.

Two-lane
for gas



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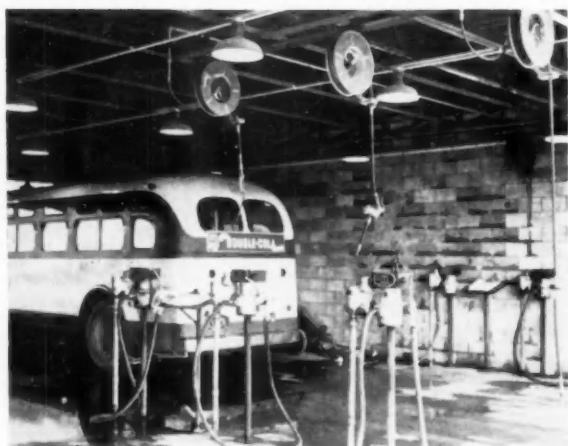
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Plan for covered fuel island shows metered pumps and the adjoining cyclone air cleaners

Two-lane service island has twin metered pumps for gasoline, diesel fuel and overhead lube reels



In the shop itself the buses

always back into service bays. This brings the engines close to tools and supplies. An exhaust duct runs behind the bays under the floor. A flexible pipe taps the duct at each bay and has an oblong mouth to fit over the exhaust pipe. The flexible pipes slide into ducts under the floor and are capped when unused. The main duct has a riser to a powerful blower on the roof.

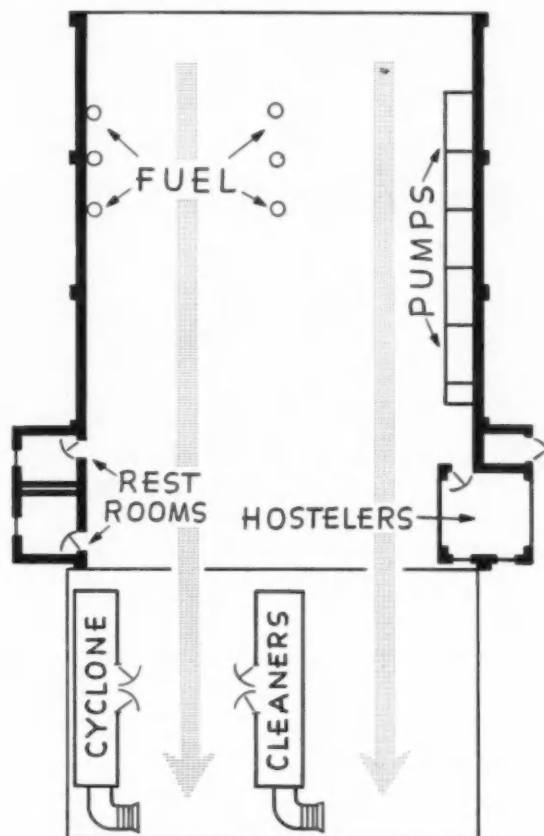
Pairs of adjustable fluorescent floodlights at the back of each grease pit help the night men with good overall lighting. However, extension lights still have to be used where the men work in their own shadows or back into the engine housing. Four fluorescent lights line each side of each grease pit.

Our three lube pits are completely open to each other. Each has its own stairway at the back, but once down a mechanic can move freely from one pit to another under the floor supporting the buses. This makes it easy to move special equipment about. It also speeds up janitor work in the pits.

Up above, gas-fired unit heaters are mounted between all the roll doors for the service bays. Each heater has its own thermostatic control. When a door is opened in the wintertime, the heaters bracketing it start up quickly to screen out the cold air. These doors face east and are not subject to the cold winds that hit the back of the property.

Our comparative isolation has

resulted in the men staying on the job better. No restaurant is close by. At the old barns the men brought their own lunches, but there was a constant trickle all day, out for snacks or soft drinks. Vending machines didn't work well because we were too



scattered. To curb the trickle we encouraged sending one man for combined orders. He'd often be gone 40 minutes to an hour.

Now there is a full battery of vending machines just outside the locker room door. Available are milk, coffee, soft drinks and chocolate, candy, cookies, cakes, pies and cigarettes. In the nearby drivers' room are sandwiches. If demand grows in the shop, sandwiches will be made available there, also. We have ten-minute coffee breaks at 10:00 and 2:20.

Net proceeds from the vending machines help defray the cost of our "Zero" parties, which are part of our continuing safety campaign. (See "Operation 'Zero' Accidents at Nashville," CCJ Aug. '56, page 74.)

Altogether the reduction

in time wastage has been considerable. This includes miles walked, waits for bottlenecks to break, and trips for cokes and snacks. We aren't kidding when we say the men now work 7 hours out of 8, instead of the 4½ out of 8 that used to prevail in the old barns!

The men have a good break on parking, too. It cost

(TURN TO PAGE 112, PLEASE)

How Far Can Piggy-Back Reefer Go?

By Phil Hirsch

Armour uses two 18 or 20-ft trailers on its piggy-back runs. Company drivers pull them to rail yards and back them onto flatcars. Railroad employees do the tie down



VHOW FAR can refrigerated commodities go by piggy-back? Here's the answer as worked out by one private carrier—Armour & Co.

- For hauls up to about 175 miles, Armour says route-loaded straight trucks capable of city delivery are the answer.

- For hauls over 500 miles, says Transportation Manager Harry Matthews, the best bet is a tractor and semi-trailer combination over-the-road to a distribution point.

- In between (175-500 miles)—when the rail charges are favorable, piggy-back is used.

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Armour & Co. has four routes in operation, finds it is economic for runs between 175 and 500 miles long



At destination, Armour's driver unties the route loaded trailer, takes it off flatcar and makes his deliveries. Company says piggy-back has cut costs by 15 per cent as compared to over-the-road costs for same routes

Here's how it works out . . .

By moving meat products from four western packing plants in the 175-500 mile range via piggy-back instead of over-the-road, Armour has cut its shipping costs approximately 15 per cent.

Rail tariffs per cwt average about 10 per cent less



Refrigeration units have greater capacity than needed to maintain temperature between 32 and 37 deg. This reduces chances of mechanical breakdown since compressor does not have to work as hard or as often enroute

than the costs of company-operated tractor-trailer combinations over parallel highways, reports Matthews. This accounts for part of the savings. The rest comes from elimination of rehandling costs at the destination.

Previously the meat had to be switched from 32-ft highway trailers to city straight trucks when it reached the distribution point. Now 18 or 20-ft trailers are loaded at the packing plant, then put aboard flatcars. At the end of the ride, these trailers are hooked up to tractors and used to make deliveries.

Armour spent \$160,000 on new trailers

before launching three of its four piggy-back runs—those between Fort Worth and Odessa, Texas (320 miles); Omaha and Kearney, Nebr. (180 miles); and Omaha and Cedar Rapids, Iowa (230 miles). The fourth run, between Fort Worth and Harlingen, Texas (430 miles), utilizes trailers supplied by the Missouri Pacific Railroad.

Admittedly, \$160,000 is a sizable investment. On the other hand, the operation is a large one—four trips a week between Fort Worth and Odessa, three each between Omaha and Kearney, and Omaha and Cedar Rapids. There are also two a week between Fort Worth and Harlingen where two trailerloads are sent each trip.

Armour's experience indicates that a smaller shipper could use piggy-back between only two points while reducing the outlay for trailers. Armour's \$160,000 bought enough trailers to launch three different TOFC runs. The freight rates, meanwhile—and hence the savings—were obtained through separate negotiation with each of the railroads involved. Therefore, the total amount of freight Armour is moving via piggy-back over all four routes is less important than the size and frequency of the shipments moving over each route.

(TURN TO PAGE 104, PLEASE)



SHOP HINTS

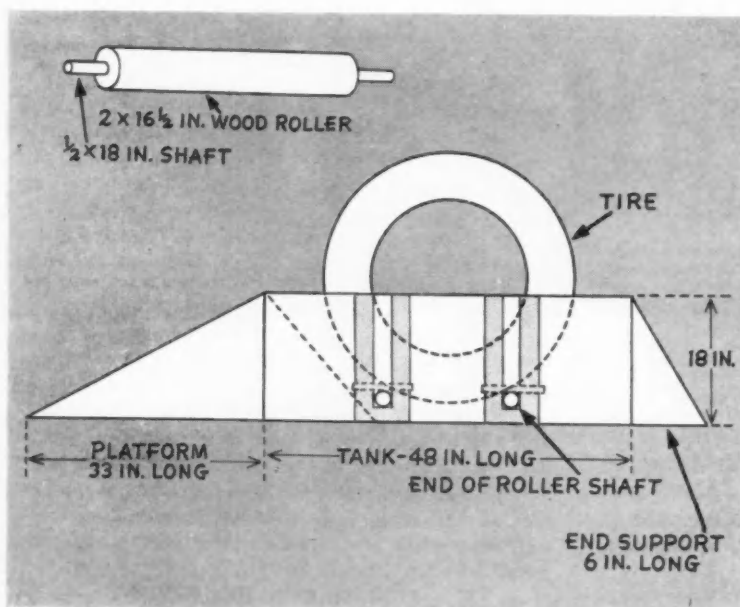
\$10 →

\$25
↓

Send us a short description and photograph or simple sketch of the shop-made maintenance short cuts you are using. We'll pay \$10 and \$25 to those who submit good ideas

Ramp and Roller Tank Speeds Tubeless Tire Testing

By Preston R. Coleman, Alan Wood Steel Co., Bridgeport, Pa.



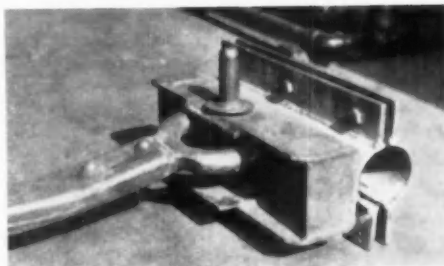
To make lifting of tubeless tires used on trucks, buses, and off-highway vehicles unnecessary, this roll-on test tank is the answer. It is constructed from 12-gauge steel and stands 18 in. high. A 33-in. platform "ramp" allows the tire to be rolled into the tank with little effort.

To make turning the tire easy while it is being tested, the casing rests on two 16 1/2-in. long wooden rollers which turn with the tire. The supports for the rollers are built inside the tank and hold the 18-in. long shafts around which the rollers revolve.

Vehicle Hitch Fits Round Crossmember

By William S. Field, Jr., Coastal Tank Lines, Reading, Pa.

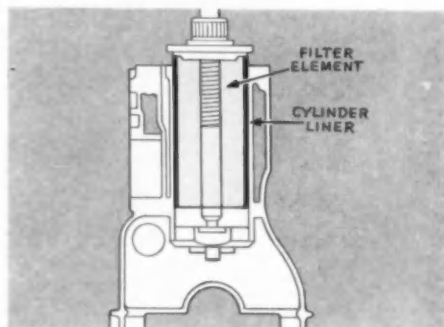
A two-foot section of 3-in. pipe cut lengthwise and four pieces of $\frac{1}{2}$ x 2-in. cold rolled welded steel were used to make a tow hitch for use on round rear truck crossmembers. The box section is constructed from $\frac{3}{8}$ -in. cold rolled steel reinforced at center and ends. The king pin is a 1-in. SAE bolt with the washer and handle welded on.



Sock Filter Speeds Cylinder Sleeve Job

By David Hamilton, Alan Wood Steel Co., Bridgeport, Pa.

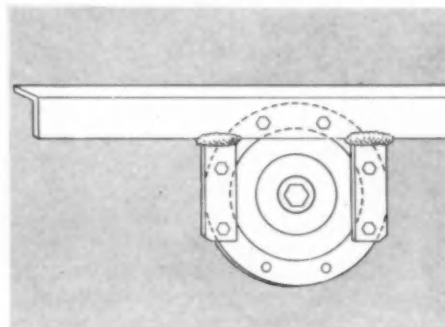
To get proper metal contraction of cylinder sleeves before they are installed, try this: Insert a sock-type oil filter element—it must be snug fitting—into the new sleeve assembly. Submerge the sleeve and filter element into a solution of dry ice and alcohol. The sock will absorb enough cold alcohol to keep the sleeve contracted enough to make installation possible.



Pinion Flange Tool Speeds Oil Seal Job

By Charles Luke, Supt. of Service, Shirk Motor Express, Reading, Pa.

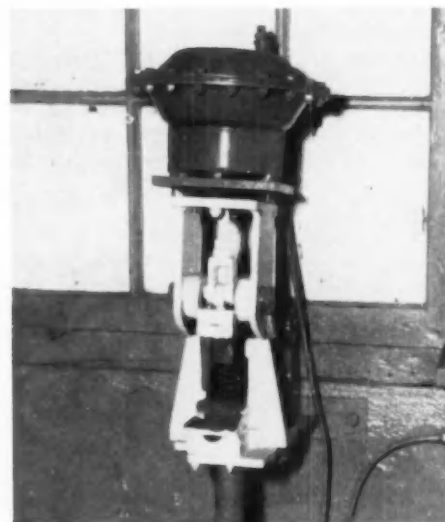
A 3-ft. piece of 2-in. angle iron with welded-on lugs holds pinion flange so that pinion shaft nut can be broken loose. Bolt tool—in four places—onto forward face of pinion flange and allow tool to rest against vehicle frame. This will hold the differential from turning while the pinion shaft nut is either loosened or tightened.



Brake Cylinder Adapts to Chain Repair

By Vic Zimmerman, Harrisburg, (Pa.) Railways Co.

A discarded air brake cylinder was mounted on a foot-operated chain repair tool to simplify the job of removing and installing chain links. The tool was previously operated by pressure from a manual foot pedal. Now compressed air does the job quicker and easier, controlled by a bus brake pedal.





Every vehicle is put on the safety lane for a thorough inspection before it is allowed on the streets. Any rig failing to meet the stringent standards is sent immediately to the shop

Safety Program Cuts Accidents in 1/2

Smith System teaches truck operators to see more as they drive, is used

VHESS CARTAGE CO., Detroit, is a forward looking carrier when it comes to safety. Vice President Edward Hess is making all-out war on accidents. And after only two years of concentrated effort in training of drivers, the company can count up a 50 per cent reduction in traffic mishaps. In fact, during the first six months of 1957 Hess claims to have saved over \$130,000 as a result of a newly instituted safety program.

Key figure in this project is Safety Director Tom Gast, working directly with a new idea in safety training developed by Harold Smith of the Institute of Driver Behavior. This system concentrates on training of drivers in better seeing habits.

At first glance

there seems to be little new in the philosophy of getting drivers to anticipate traffic problems and to actually "see what they are looking at." Yet any driver at Hess will attest to the fact that the Smith program does correct sloppy seeing habits. The records prove it.

Hess Cartage is a common carrier operating in five midwestern states. It carries heavy cargo, steel, chemicals, and cement and time is of the essence. The fleet numbers around 300 vehicles of the heavy-duty class, many of which are semis pulling full trailers. So mishaps can be costly.

About a year ago

Hess put the Smith program into effect, employing Smith himself to get the training plan going. Here is the tally up to now in terms of benefits resulting from better driving habits in over-the-road hauling . . .

1. 1955—206 accidents or 1.7 per 100,000 miles
2. 1956—133 accidents or 1.18 per 100,000 miles
3. 1957—105 (projected) or 0.9 per 100,000 miles

The \$130,000 savings enjoyed during this first half of 1957 can be broken down in the following manner, according to Tom Gast:

- Reduction of claim prospects.
- Reduction of time loss of both vehicles and drivers.
- Reduced maintenance costs and cost of repairs.
- Improvement in revenue due to more efficient operation.

All this, of course, discounts the obvious advantage of better public relations and higher morale in the company. Best yardstick, however, of the effectiveness of the program is in the reduction of chargeable accidents. Where chargeable accidents totaled 92 during the year of 1955, they dropped to 63 in 1956. This year the company expects to keep them down around 40.

What is the Smith system?

Basically, it involves the evaluating of individual truck drivers on a 12-point rating system, and then outlining five simple principles for new habit formation that will help avoid accidents. Smith (originally) and now Tom Gast conducts actual on-the-road training sessions with his drivers. Gast spends up to 80 per cent of his time riding in the cab with drivers, pointing out the principles of better seeing. Here in brief are the "five seeing jobs" outlined in this director-to-driver hassle in the cab of the truck:

1. Aim (your eyes) high in steering. Look for problems ahead of the guy ahead of you.
2. Get the big picture. Don't get trapped into

watching only what's immediately ahead of you. Observe what's happening in oncoming traffic, at the sides and behind.

3. Keep your eyes moving.

4. Make sure others see you. Don't assume that a pedestrian crossing the street or a driver pulling out from a curb will see you coming.

5. Leave yourself an out—ample space to stop or swerve.

These are simple

rules to be sure. At first they seem obvious. Yet during a trip with a driver, Tom Gast can point out

(TURN TO PAGE 119, PLEASE)

Safety Director Tom Gast reviews safety records with drivers in "shirt sleeve" sessions. Hess finds informality keeps men receptive to ideas

for Hess Cartage

as basis for long range safety "war"



Gast often holds spontaneous safety meetings wherever and whenever they're needed. These "cab sessions" get the best response, he finds

The system's author, Harold L. Smith, center, discusses program with Borden's R. L. Heyboer, left, and Interstate's William Penning, right



DOWELL

Bill Palmer found that Dowell, Inc.'s operator selection program works fine. Here's the "how" and "why" of it. You may be able to use it too. This is the third of a series describing the Dowell operation. Previous articles described the fleet's method of scheduling PM inspections (Oct., page 92) and of determining how many mechanics its shops need (Sept., page 66). Next month, you'll see how Dowell's training program turns out skilled equipment operators and supervisors.

WHAT WOULD YOU DO if you had to hire and train more than 200 drivers, technicians, and mechanics each year over a six-year period?

There's more to the problem. How would you set up a system to permit local managers in some 90 scattered stations to do the hiring, even though the managers lack formal training in personnel work? Would your system be good enough to cut your average training costs in half?

That's the problem faced by Dowell, Inc. over the past few years. Dowell solved it. Science helped. Company and employees now enjoy the profits of the solution.

For the company, the pay-off

is a staff of qualified, reasonably happy employees who are likely to stay with the organization for a long time to come. Many of them will move up in the organization, becoming supervisors and managers. In the meantime, Dowell is reaping big savings by having to train fewer new employees as replacements for men leaving the organization. And, with fewer new men to train, the supervisors can do a better job of training the new men needed for the steadily expanding operation.

For the employees themselves, there are the satisfactions of knowing that they were hired because they equaled or bettered the company's standards and that there's little doubt of their ability to do their job.

The solution combines men and method. Scientific

Selection System

methods, applied by station managers, result in the hiring only of those applicants most likely to succeed with the company.

The selection tools include a combination application-interview form and a detailed instruction manual for the station managers. The hiring manual is based on the fact that the average station manager is called on only occasionally and irregularly to hire new men, compared to his other duties. He may have a rough idea of the kind of man he wants. He has a vague idea of how to find that man. He has no sound method of evaluating applicants. Distracted by many duties that are familiar and can be acted on promptly the station manager is likely to procrastinate in his hiring, to tackle it spasmodically, and to wind up somewhat desperately hiring the first man that appeals to him personally.

With the manual to guide

him, he can intelligently interview applicants, interpret their answers to his questions, and rate a group of applicants to select those most suitable. It gives him a method which eliminates waste motions, discounts personal prejudices and usually points up the best choices from the applicants. Although it is designed specifically for equipment operators, it can be adapted to hiring other employees.

The application blank is a four-page printed form. The front page covers general information about the applicant, including his employment record for the past 10 years, and is filled in by the applicant. Most of the inner two pages are completed during a patterned interview of the type developed by Robert M. McMurphy.

The patterned interview explores

six major areas:

1. Previous work experience, including attitudes and habits.
2. Present financial situation, focussing on the applicant's probable motivation.
3. Education, to discover if he has too little or too much for the job.
4. Family background, to determine if he can adjust easily to an equipment operator's life.
5. Domestic situation, to learn of any stresses he may be exposed to at home.
6. His health, particularly whether he "enjoys ill health" or is accident prone.

Questions in each group are also designed to bring out information about his habits and his attitudes toward people he works with.

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Finds Long Lasting Employees

Scientific tests and guided interviews help local managers choose qualified staffs. There's no guessing since system includes summary to spot best man

After an interview the local manager sums up the applicant's qualifications, using this form to guide his final decision

SUMMARY AND EVALUATION		PLACE AN "X" IN THE COLUMN THAT BEST DESCRIBES THE APPLICANT'S QUALIFICATIONS			
		OUT- STANDING	GOOD	MAR- GINAL	POOR
"CAN DO" FACTORS	APPEARANCE, MANNERS.....				
	AVAILABILITY FOR THIS WORK.....				
	EDUCATION, AS REQUIRED BY THIS JOB.....				
	INTELLIGENCE, ABILITY TO LEARN, SOLVE PROBLEMS.....				
	EXPERIENCE IN THIS FIELD.....				
	KNOWLEDGE OF THE PRODUCT.....				
	PHYSICAL CONDITION, HEALTH, ENERGY.....				
"WILL DO" FACTORS	CHARACTER TRAITS (BASIC HABITS)				
	STABILITY; MAINTAINING SAME JOB AND INTERESTS.....				
	INDUSTRY; WILLINGNESS TO WORK.....				
	PERSEVERANCE; FINISHING WHAT HE STARTS.....				
	ABILITY TO GET ALONG WITH PEOPLE.....				
	LOYALTY; IDENTIFYING WITH EMPLOYER.....				
	SELF-RELIANCE; STANDING ON OWN FEET, MAKING OWN DECISIONS.....				
	LEADERSHIP.....				
	MOTIVATION				
	INTEREST IN THIS WORK.....				
	ECONOMIC NEED.....				
	NEED FOR RECOGNITION; PERSONAL STATUS.....				
	NEED TO EXCEL.....				
	NEED TO SERVE.....				
	NEED TO ACQUIRE.....				
	DEGREE OF EMOTIONAL MATURITY				
	FREEDOM FROM DEPENDENCE.....				
	REGARD FOR CONSEQUENCES.....				
	CAPACITY FOR SELF-DISCIPLINE.....				
	FREEDOM FROM SELFISHNESS.....				
	FREEDOM FROM SHOW-OFF TENDENCIES.....				
	FREEDOM FROM PLEASURE-MINDEDNESS.....				
	FREEDOM FROM DESTRUCTIVE TENDENCIES.....				
	FREEDOM FROM WISHFUL THINKING.....				
SUMMARY AND RATING BY.....		OVER-ALL RATING: 1 2 3 4			



Transportation Meeting Discusses

A NEW APPROACH TO

**What's needed, says Jim Moreland of Fifth Avenue Coach,
is an engineering approach . . .**

. . . that is passed on to the men in the shop

▼ **WHAT'S ESSENTIAL** for good maintenance? In a nutshell, Jim Moreland, of Fifth Avenue Coach Lines, New York City, answers: "Engineering and training."

His answer kicked-off much discussion at last month's Transportation Meeting of the Society of Automotive Engineers in Cleveland, Ohio.

In summary, here's how Moreland challenged the fleetmen at the meeting . . .

- Best preventive maintenance program is still not good enough unless it is efficient.
- To make it efficient, you need an engineering approach—on the same level as the engineers who designed the vehicle in the first place.
- While not every fleet can afford a fully qualified engineer, it can have at least one supervisor who takes an engineering approach to maintenance problems.
- These key men have to pass on information to the shop mechanics through training programs and on-the-job guidance.

▲ "Reason is . . . the increasing complexity of today's vehicles"

Reason for the need for an engineering approach given by Moreland—and emphasized in the discussion by R. P. Lewis, of Schenck Transportation, Long Island, N. Y., and Bill Williamson, of St. Louis (Mo) Public Service—is the increasing complexity of today's vehicles. For example . . .

- Low compression gasoline engines have been largely replaced by high compression diesels.
- Carburetors have been replaced by high precision fuel injection.
- Mechanical gear boxes have given way to hydraulic transmissions.

- New components are being added, such as air conditioning.
- DC generators in most cases are supplanted by more complex AC alternators.

▲ "maintenance problems arise from factory engineering changes . . ."

As might be expected from busmen, these are bus problems. However, similar maintenance problems arise from factory engineering changes and improvements to challenge truck and passenger car fleetmen also.

An engineering approach is necessary to solve these problems, says Moreland. He adds: "unless maintenance keeps pace in its engineering with that of the manufacturer, it can be of little value in supplying the vital information which can affect future design. Furthermore, the greater the knowledge of technology of his equipment possessed by the operator, the less time and money is wasted in finding the solution to design failures."

▲ "... you can always find a man with the engineering approach"

An interesting way to find men with an engineering approach was suggested by Clarence Jarosz of Bendix-Westinghouse Automotive Air Brake Co. in the discussion. His idea: Fleetmen could employ—on a part time basis—engineering students, especially from colleges where an industry cooperative program is in effect. It was also agreed that, if you can't find or afford a professional engineer, you can always find a man with the engineering approach.

EFFICIENT MAINTENANCE . . .

▲ "... from the man who knows to the mechanic in the shop"

Next step is to transfer the engineering from the man who knows to the mechanic in the shop. This is where training comes in.

Moreland does it through specific class sessions. (His program is described in detail in CCJ, Jan. '56, page 70.) Since his is a large fleet, his supervisors attend the sessions and pass the knowledge on, using on-the-job guidance. His sessions sometimes run as long as seven hours, are repeated until all supervisory personnel have a chance to attend.

Moreland emphasizes the need for the supervisors to pass-on the training. "A most essential ingredient of the training program is follow-up under service conditions," is the way he puts it.

Cost of training time, states Moreland unequivocally, is offset by improved maintenance. He says his program has paid off in dollars and cents even though his men attend lengthy classes on "company time." Williamson was not too sure on this point. In the discussion, he introduced this "rule of reason":

▲ "His problem is to get the most value for his maintenance dollar"

"At today's labor rates, it is essential that we weigh the cost of elaborate training facilities against the value of such training. It is easy to say 'set up a school on company time,' but it is not so easy for a budget-minded maintenance man to do this. His problem is to get the most value for his maintenance dollar. How he does it will, of course, vary with the size of his operation and the nature of the problem."

Need for attention to purchasing to get efficient maintenance was brought out in the discussion. R. P. Lewis stated, "We maintain a perpetual inventory on all parts of \$170 per vehicle, while the manufacturer feels that \$400 worth of replacement parts should be purchased annually. "Our shop superintendent," says Lewis, "... is also our purchasing agent."

R. K. Reese, Automotive Engineer for Kraft Foods, Chicago, added the comment, "All of us know that all too often the wrong vehicle is purchased because of price differential and competitive bid. Every day

we see occurrences of this on our streets by under-powered, undertired and improperly engineered vehicles. . . . There should be meetings conducted by the fleet superintendent or engineer and the purchasing department regularly for the specific purpose of outlining the reasons for the requests that are being made by the maintenance department relative to parts, supplies, equipment and vehicles."

▲ "Engineering knowledge is also essential to proper instrumentation"

Engineering knowledge is also essential to proper instrumentation. "Too much consideration can be put on the use of gages," says Moreland, "without a proportionate education program in understanding their meaning." He warns that an unsatisfactory gage reading does not always mean a defective component. But unless there is an understanding of all the conditions that can affect the gage reading, the component might be needlessly pulled off.

Murray Simkins, COMMERCIAL CAR JOURNAL Executive Editor, illustrated this point effectively in the discussion. Said he: "How many men in the average fleet shop understand the principle of the Wheatstone Bridge? Until they do, can they possibly use a gas analyzer effectively? . . . It takes time and money to provide this background—but until they have this understanding, this 'engineering approach to maintenance' will be just so much talk."

▲ "... manufacturer service personnel conduct special classes . . ."

Kay Glynn, formerly of AT&T, Willard Lord and Jack Bassett, Raybestos-Manhattan, all put in a word for fleet training courses offered by the various colleges and universities. (See CCJ, Nov., page 148, for the list of schools.)

Lynn Edsall, Philadelphia Electric Co., and Ray Moore, Dixie-Ohio Express, both endorsed fleet classroom instruction. Moore says when he buys new equipment or components, he has manufacturer service personnel conduct special classes for his mechanics in maintenance of the new units.

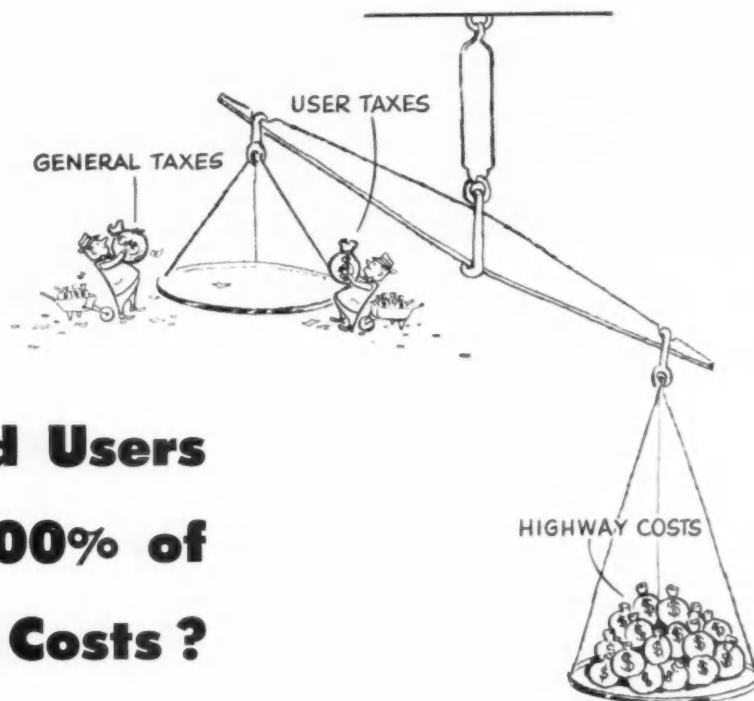
Should Users Pay 100% of Highway Costs?

Answer to this question directly affects both the highway use taxes and the general taxes you pay. It's the first in a series of articles on critical highway problems prepared especially for COMMERCIAL CAR JOURNAL readers by Yule Fisher, research counsel, National Highway Users Conference, Washington, D.C.

TRUCK OPERATORS and other highway users are today paying the entire federal share of highway construction costs in motor vehicle levies. You, therefore, have a direct interest in the federal government as a major highway user and beneficiary.

Reports indicate substantial increases in the revised estimate of cost for completing the Interstate System. This makes a realistic evaluation of federal use of highways even more important to highway users.

Big question is, how much of highway costs should be paid by the federal government from general taxes in return for the highway benefits that are shared by all taxpayers? Here is some background to help you advise your Congressmen.



Federal interest and activity in the development of adequate roads go back to the founding of the country. As early as 1801, an active role was urged upon the government by Alexander Hamilton, who noted, "the improvement of the communications between different parts of our country is an object well worthy of the national purse. . . . To provide roads and bridges is within the direct purview of the Constitution."

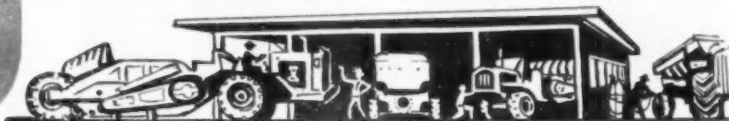
In 1806, Congress authorized construction of the National Road with federal funds. By providing the nation with a road connecting the several states, Congress intended to stimulate commerce between them as well as to establish post and defense roads. Federal aid as a cooperative federal-state undertaking began with the passage of the Federal Aid Road Act of 1916.

Federal interest in both the planning and construction of the nation's road and street systems is based on exercise of power delegated in Article I, Section 8 of the United States Constitution. This directs Congress to "provide for the common defense and general welfare," to "establish . . . post roads" and "to regulate commerce . . . among the several States."

Federal benefits from highways are derived from direct use of the facilities by vehicles of federal agencies and departments executing their responsibilities. Through the Depts. of Defense and Post Office, the federal government operates one of the

(TURN TO PAGE 151, PLEASE)

CCJ CONSTRUCTION FLEET MAINTENANCE



Compiled by the Editors of COMMERCIAL CAR JOURNAL

AT YOUR SERVICE . . .

With cold weather here and the extra work load imposed upon most construction fleet shops, it's time to check up on working conditions for your men. If you haven't provided good heat, light and ventilation, you can expect some work slowdown even though your mechanics may not even recognize the causes.

Watch for drafts especially in larger shops. A man lying on the floor is a prime target for chilblains and colds if he is not comfortable. It's not only due to lower temperatures, but also to the fact that his circulation and body metabolism is slower while he's inactive. So throw up some portable screens or temporary partitions for the man who's got to work in a prone position.

Then give him adequate light. Shop lights such as drop cords don't do the job properly. He'll need good overall illumination, especially in spots where windows are inadequate. And when you close doors, don't "seal up" your men. See that a window is open or a ventilation system is used even though engines are not continually running. It will pay off in increased work output . . .

You see cowboy operators chewing up tires on earthmovers and you tell 'em it's unnecessary. They don't often believe you. But tell them that the tires on that rig cost up to one quarter of the cost of the equipment—that the time saved will not offset the cost of the tires—that just a little more care will save rubber and get the job done in about the same amount of time.

According to Euclid, tire operating costs may run as much as 37 per cent of the costs of operation (that's with the largest tires). So any abuses that shorten tire life make up a sizeable part of the increased costs. Let the operator spin the tires on his own car; the tires represent there only about 3 per cent of the cost of his automobile. Let him save the cowboy stuff for his "pleasure" driving. . . .

A project engineer in Detroit

gave us something to think about last week when he brought up the subject of employee morale. He figured the secret of his company's success was simply better employee relations. "Anyone can buy the equipment to do the job," he said, "and machines and shop tools are available to all." It's only in the application of tools that you can really get the advantage over a competitor. . . . And that's a matter of efficient utilization of manpower. Men can dog it—or they can go out and get the job done with dispatch. It's all a matter of attitudes. Good training, good supervision, good feeling between the boss and the employee make for high production. And you know he's got a point . . .

Few contractors can

store equipment under roof during subzero weather. Yet low temperatures are extremely hard on equipment according to factory engineers. Impact tests have shown that at 20° below zero some metals break 30 per cent faster than at normal temperatures. Thus equipment left to stand outside in winter months may show up at a disadvantage when compared with vehicles properly stored. A careful warm up before the equipment is operated may offset this condition to some extent.

Do you use shop bulletin boards?

We've seen all kinds in our travels around the country. They generally fall into three types. There's the dog-eared, yellow page, good-n-crappy type. There's the one where the mechanics cut their initials, wipe their hands or hang their pin-ups. And there's the one that's really used.

This one holds daily or weekly reminders, tips from manufacturers on service, safety material and general and sundry bits of information for employees. It's a handy and convenient way of spreading the word. It's a good place to give individual recognition. It's an important link in the man vs machine battle that goes on wherever machines operate. Why don't you try one?



Impact Wrenches Speed Assembly

Automatic torque control impact wrenches will do a wide variety of jobs in the fleet shop. They save time over hand wrenches, but—what is probably more important—they simplify training of personnel. Bolts and cap screws must be tightened to specify torque on practically every assembly on earthmoving equipment. With the impact type tool it's simply a matter of setting the torque to the desired specification from 14 to 80 lb ft. For the lower range, the 5¼-lb tool is equipped with a light torsion bar with capacity up to 60 lb ft. This mechanic is running up the cap screws on a wheel assembly at the Caterpillar works at Joliet, Ill.

MANY AIR TOOLS are used under more or less severe operating conditions which include water, dust, dirt and heat.

Water, for example, will tend to wash off the lubricating film from the wearing surfaces. During storage it can cause rust. For this reason, oils which will "wet" the metal parts and prevent contact with water are recommended. Such lubricants create an adhesive protective film which adequately resists the washing effects of water and sticks tenaciously to all wearing elements.

The means by which lubricants are applied or distributed has a marked effect upon the operation of air tools. Even the best of oils or greases may fail to do their work if they are used carelessly, or in such a manner that they fail to reach all the wearing elements of the tools.

More failures or complaints arise from insufficient lubrication than from any average operating condition. In some cases, this may be due to ignorance; in others, to neglect; often because operators do not fully appreciate the necessity for lubricating their equipment.

Careless handling in the presence of dust and dirt which may enter the tool along with the air is always a potential cause of wear.

Air Tools Need Lubrication and Care

Normally, it is easy to prevent abrasive foreign matter from entering the tool itself via the air line if an air filter or dirt trap is installed and if the hose is in good condition.

Care in handling when not in actual operation will prevent dirt entering from other sources. If the tool is stored in an oil bath or rested in a position or location free from dirt, it should function satisfactorily for an indefinite period.

Clean air should always be used. This will depend, however, upon the location of the compressor, its air intake, whether or not air filters are installed, and the cleanliness of the inter-coolers, pipe lines and air hose. Furthermore, if any of the parts are rusted on the interior surfaces, particles of rust may flake off and be carried along by the air.

To keep out particles of rubber from the air hose and gaskets, which would interfere with the free operation of the tool mechanisms, locating a strainer in the inlet pipe is recommended. Some builders include a strainer or filter in the tool itself.

Such strainers should effectively remove the greater part of any solid foreign matter and protect the working mechanisms of the tool. The strainer must be cleaned at frequent and regular intervals.

Automatic lubrication by means of air line oilers or atomizers mechanically delivers the requisite amount of clean oil to the air lines. Lubricators of this type prevent contamination of the oil from exterior sources. Naturally, fresh oil charged to lubricators should be clean, and this can be assured if containers used on the job are of the closed-cover type.

In the absence of automatic means of lubrication, tools must be oiled periodically by hand. There will be more possibility of accidental entry of dust or dirt occurring under such conditions. In some localities the atmosphere will often be laden with dust, and the lubricants should be stored and handled with even greater care. They should be kept in closed containers and placed in a handy location to eliminate loss of time when lubricating.

Experimental Tractor Controlled By Radio

A "ROBOT" TRACTOR that can be operated anywhere within range of the radio by which it is controlled is undergoing tests at the U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Va.

The tractor, believed to represent the first application of the remote control principle to a piece of construction equipment, may prove invaluable in construction work in radioactivated and combat zones. It may also be useful in various other tasks, such as fighting large fuel storage fires.



From a jeep or helicopter equipped with a standard military radio transmitter and a special control box, the operator can start and stop the machine, engage and disengage the gears, operate in forward and reverse, manipulate the dozer blade up and down, and activate the steering mechanism.

Normal operations can be performed from distances of up to 15 miles, the practical range of the radio, simply by manipulating the buttons on the control box. Army Engineers believe that the installation of small television cameras on the tractor will give the remote operator additional knowledge and observation of the machine, and give him the ability to work it without the need of information relayed by a visual observer.

The prototype is the standard commercial "tornado" manufactured by Le Tourneau-Westinghouse, Peoria, Ill. The only visible change to the machine is the substitution of a standard military radio receiving set for the operator's seat. Manual controls have been retained for conventional operations.

As a safety precaution, early tests have been conducted with the tractor and control point within viewing distance. It will be operated from greater distances as the test schedule progresses.

Don't Be Shocked By Ungrounded Tools

IS YOUR PORTABLE electric equipment properly grounded? If not, burns and death-causing shock may result, according to the National Safety Council.

To reduce the danger of electrical shock, it's important that a separate ground wire be provided from the tool to a low-resistance ground connection. Water pipes, metal frameworks of buildings, or other metal structures in direct contact with the earth may be used to ground equipment.

Here are some suggestions on grounding portable electrical equipment:

1. When wiring is enclosed with metal conduit or protected by armored cable, all couplings and fittings used to make connections between the conduit or cable and the electrical equipment should provide metal-to-

metal contact to assure a continuous ground return.

2. If the wiring is nonmetallic sheathed cable or knob and tube work—such as is used in construction work—a third wire must be connected to the grounding terminal on the receptacle to provide a good conducting path to a grounding electrode or water pipe.

3. Grounding wires should be checked to see that the size is correct for the capacity of the nearest fuse.

4. No fuses, automatic cutouts or hand-operated switches should be inserted in a grounding line.

To ensure automatic use of the ground, a common type of plug with a U-shaped grounding blade and two standard parallel polarized blades now can be used.

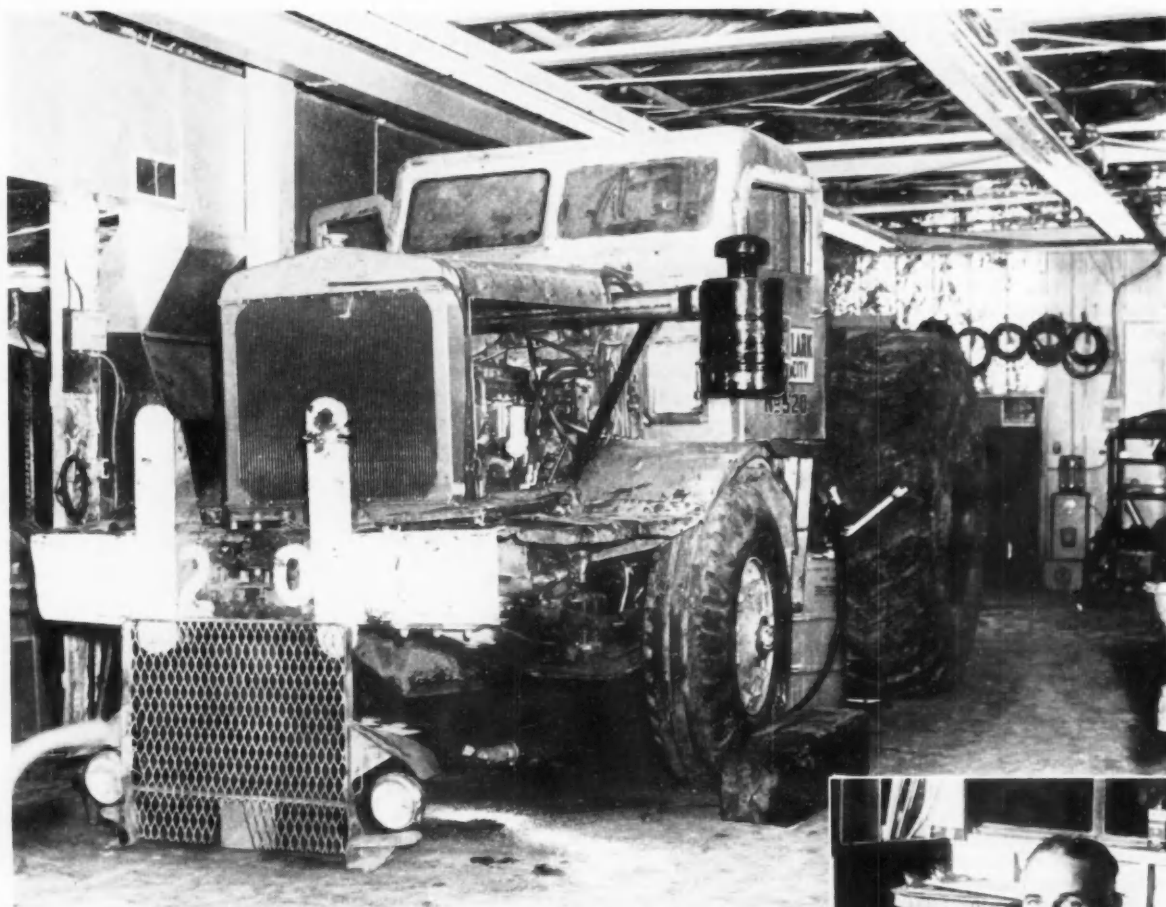


130-Ton Low-Bed Giant Is Steerable

WHAT IS believed to be unprecedented in the field of heavy hauling equipment—for size and maneuverability—is this 130-ton capacity steering trailer created by Wilhelm Trucking, Portland, Ore.

With a tare weight of 53,000 lb, this massive 10-ft side steel structure rides on 24 U. S. Super Fleetmaster 11.00 x 20 tires, with 14-ply wire cord, safety shield construction. Wheels are by Budd. The trailer is

pulled by an International West Coast model tractor especially equipped and adapted for the operation. With the tractor adding 10 more wheels to the unit, the load is distributed on 34 tires. Of particular interest is the ingenious steering construction involving a 4-axle (32,000-lb capacity each, Standard Forge) rear assembly hydraulically actuated from an operator's cab mounted high on the left rear side of the trailer.



Shop rebuilds and dynamometer-tests engines year round. During the slack season, it also completely rebuilds entire construction rigs

List & Clark Shop Foreman William A. Fowler says time and mileage do not accurately indicate engine wear



Base Shop Rebuilds for Efficient Maintenance

▼ A DIFFERENT approach to the problem of servicing construction equipment is used by List & Clark Construction Co., Kansas City, Mo. They established a special engine rebuild shop at their 40-acre equipment yard near Holliday, Kan.

This shop is set up to furnish rebuilt, dynamometer-tested replacement engines for all the far-flung equipment in the field. Shop also rebuilds transmission, differentials and torque converters for exchange.

Advantages include reduction of costly movement of heavy equipment between base shop and field job

when engine overhaul is indicated. Performing major engine overhauls in the field is eliminated, releasing field crews for repairs and maintenance. Switching to a standby exchange engine in the field puts equipment back in service hours and often days quicker, results in substantial reductions in down time.

Eleven spare engines now provide replacement power for more than 200 pieces of motorized equipment. The program started two years ago and indications are that the rebuilt engines operate for longer periods. Running in engines on test loads not only eliminates delay due to leaks, adjustments and

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field test runs but results in considerable savings over other methods.

Says List & Clark Shop Foreman, William

A. Fowler, one of the main difficulties with pinpointing service needs in a construction spread is that neither mileage nor running time are sufficiently accurate to warrant scheduling overhauls on these factors. Hour meters can give the number of hours that an engine has been operated but they can't portray whether the operation was at idle or with medium load or overload.

Most people think of broken seals when engine and transmission leaks are mentioned, but here leaks indicate internal difficulties rather than simple seal leaks. According to Fowler, it is sufficient evidence that an engine, transmission or torque converter needs overhauling when it leaks excessively or starts throwing oil since usually internal conditions cause the break in seals.

Excessive oil consumption often heralds a coming overhaul for a torque converter. Most torque converters in the construction equipment field use fuel oil as the torque converter fluid. The fuel oil flows from the supply tank through the torque converter to the engine. When trouble develops, it is usually reflected in an increase in fuel consumption.

A factor that will also aid greatly in determining the economical point for engine overhaul is being accumulated as written histories of engines are filed. These histories have been building up for two years and the data has already proved invaluable.

Parts data on each engine being

rebuilt are now recorded on the engine history form illustrated. The form's newest revision provides check-off circles to make it handy for the mechanic to fill out the form.

Mechanic who dismantles engine always rebuilds it, too. Standard practice is to install factory kits of liners and pistons. Factory exchange crankshafts are also used



When rebuilt parts are installed—and many parts are also rebuilt in the engine shop—the rebuilder of the parts is listed. This establishes responsibility for the part as to whether it was rebuilt in the shop or outside. Over and under sizes are listed for future reference.

The back of the sheet is

used later by the List & Clark accounting department for costing parts and labor and finally the engine history is filed away by make of engine. The form is signed by the mechanic doing the work before it leaves the engine shop.

The mechanic who dismantles an engine becomes automatically its rebuilder. This eliminates confusion when an engine passes through several hands. Should the mechanic require aid, he still remains responsible and is thus more likely to make sure his help completes the job to his satisfaction.

When an engine has been dismantled, there is the problem of how much to do. This decision is made by Fowler who usually checks the measurements of crankshafts and cylinder liners with the mechanic. Of course the objective is to do enough without doing too much so an engine will have longest possible useful life without outsize overhaul cost.

When to replace sleeves, engine liners or crankshafts is mostly a matter of accurate measuring. One of the things that must be watched is the presence of block distortion when new cylinder liners are indicated. GM liners are properly driven out cold and new ones are installed by push fit.

Older blocks may have liner

bores warped to egg shapes. If this condition is present, block is rebored to .020 oversize. This is the only oversize outside diameter available on replace-

(TURN TO NEXT PAGE, PLEASE)

After engine has been dismantled by mechanic, Shop Foreman Fowler measures crankshafts and cylinder liners before recommending amount of work he thinks is necessary



Base Shop Rebuilds . . .

Continued from Page C5

ment liners and about as much metal as can be safely removed from the original bore.

Blocks with good bores usually stand installation of standard sleeves three or four times. About four liners with oversize inside diameters are used before a block has to be discarded by reason of cracks or distortion. Usually only the block is discarded.

Standard practice here is to install already fitted factory kits of liners and pistons. Factory exchange crankshafts are used. A shaft that needs grinding is exchanged with an undersized crankshaft if the one taken out retains sufficient metal to be reground. Exchanges are accepted on undersizes up to .030 on GM engines and .040 on Cummins.

Experiments are now being carried on by List & Clark with chrome plating of throws and main diameters of crankshafts. This method—under trial at an outside shop—consists of electroplating the bearing throws with chrome and grinding back to standard. It is not to be confused with the well-known system of metallizing whereby the journals are sprayed with hot metal.

List & Clark Construction Co. is one of the older construction companies based in Kansas City, with over 30 years record in earth moving and general contracting in several states. It is currently completing a \$4,238,093 contract on the \$90,000,000 Tuttle Creek Dam project for the Corps of Engineers, U. S. Army, Kansas City district, involving more than 9,000,000 cu yd of embankment.

There are more than 200 major engines in the List & Clark spread. About 40 per cent are General Motors 2-cycle diesels in 6-110's, 6-71's, 4-71's and 3-71's. About 30 per cent are Caterpillar diesels consisting of a number of different models. The remaining 30 per cent is divided among Cummins, Murphy and Buda.

Thirty engines are used to power Northwest, Koehring, Manitowoc and Shield Bantam shovels, draglines and cranes—with capacities ranging from 1/2 to 5 cu yd. A big 4500 Manitowoc dragline has twin 6-71 GM diesels, uses an 8-yd bucket. Another 4500 is a 5 1/2-cu yd rock shovel with a 600 hp Cummins engine. Other machines are powered with GM, Murphy, Caterpillar, Minneapolis-Moline, LeRoi, Twin City and Cummins.

There are more than 100 major pieces of rubber-

LIST & CLARK CONSTRUCTION COMPANY			
ENGINE HISTORY			
Name:	Date:		
Model:	Serial No.:	Repaired by:	
From:	EST. OF:	(L&C or Other)	
Remarks:	EST. OF: List & Clark O.K.		
Installed in:			
If new parts—Check in Square	Parts Rebuilt by	Remarks—Condition U.O. or G.O.	
ENGINE			
Air Cleaner <input type="checkbox"/> Type			
Radiator <input type="checkbox"/>			
Water Pump <input type="checkbox"/>			
Oil Cooler <input type="checkbox"/>			
Cylinder Heads <input type="checkbox"/>			
Valves, Springs, Guides <input type="checkbox"/>			
Pistons, Pins, Rings <input type="checkbox"/>			
Crankshaft <input type="checkbox"/> New, Hones			
Main Rods, Bearings <input type="checkbox"/>			
Camshaft, Bearings <input type="checkbox"/>			
Valvetrain <input type="checkbox"/>			
Push Rods, Valves <input type="checkbox"/>			
Injectors <input type="checkbox"/>			
Timing Gears, Oil Seal <input type="checkbox"/>			
Oil Pump <input type="checkbox"/>			
Water Pumps <input type="checkbox"/>			
Supercharger, and Controls <input type="checkbox"/>			
Throttle, Ring Gear <input type="checkbox"/>			
Vibration Damper <input type="checkbox"/>			
Clutch <input type="checkbox"/>			
Clutch <input type="checkbox"/>			
Fastener <input type="checkbox"/> Disc <input type="checkbox"/>			
Bearings <input type="checkbox"/>			
Control & P.P. Assy. <input type="checkbox"/>			
ACCESSORIES			
Air Compressor <input type="checkbox"/>			
Starter <input type="checkbox"/> Type <input type="checkbox"/>			
Generator <input type="checkbox"/>			
NOTES			
Est. <input type="checkbox"/>			
Air Comp. <input type="checkbox"/> No.			
Generator <input type="checkbox"/> No.			
Accessory <input type="checkbox"/> No.			

Engine history form makes mechanic's job of recording all the needed data easier

Next month: List & Clark's shop building and floor layout, shop equipment and transmission, differential and torque converter bay.

tired equipment. There are some 26 air compressors used to supply air for rock drills and other types of air operated equipment. These compressors are Ingersoll-Rand, Gardner-Denver, Chicago Pneumatic and Joy—nearly all mounted on trailers. There are 15 Lincoln welders in capacities of 200 and 300 amp with Continental or Hercules engines. The company has more than 100 trucks of all sizes, if you include pickups. Two GMC diesel tractors handle transporting much of the equipment to jobs with a large flat bed trailer and a low-boy.

In the dirt moving fleet there are a large number of Euclid bottom dump off-highway giants with capacities ranging from 13 to 30 cu yd and a dozen LeTourneau-Westinghouse Tournapulls. The "Euc's" have Fuller transmission, mostly of the 5-speed type, with a few 10-speed. Largely these are powered with 6-71 GM and 6-110 GM diesels. The "Pulls" are 12-cu yd size with 6-71 GM engines.

In the motor grader classification, there are a number of No. 12 Caterpillar machines with Caterpillar diesels, and two Huber-Warco with GM 6-71's. Some 40 portable, engine-operated light plants, mostly Caterpillar are used. Over two dozen engines, both gas and diesel, are needed to operate a like number of water pumps ranging in size from 2 to 8-in. Hercules is the engine found most.



Left. Savin Construction Co., East Hartford, Conn., finds use for two steam cleaners at same time. One is cold rinsing a Euclid truck. Another cuts grease from two engine blocks

Below. Central Pennsylvania Quarry Stripping and Construction Co., Hazleton, Pa., uses steam cleaner regularly in cleaning its dumper fleet



STEAM CLEANERS Up Work Quality

STEAM CLEANING of equipment before bringing it in for a regular inspection is a must for many construction fleets. While the job takes a little time, companies report that the practice is mandatory either in good or bad weather. They cite several advantages.

First, mechanics work more carefully with inspections and adjustments when they're handling clean parts and assemblies. They are more apt to spend the time in inspection that is required to locate cracks, wear, maladjustments and evidence of improper operation. Maintenance areas stay cleaner, which in turn makes for better workmanship.

Another advantage comes in returning clean equipment to the field after service work. New looking machines are treated like new—given more attention by the operators. The result is actually longer equipment life and a substantial saving for the contractor.

The H. O. Penn Machinery Corp., Westbury, N. Y., uses steam cleaners in pairs. One man cleans equipment while another cleans parts. The cleaner is mounted on a trailer so that machines with heavy accumulations of mud, clay and grease, can be given the first scrub down out away from the shop.

Penn uses a fork lift truck to pull the trailer around the yard. This makes it especially useful when a shovel is to be overhauled as it is simpler to move the cleaner than to move the shovel. It's also advantageous when working on a "dead" machine. The company says that one man

can clean a tractor-scraper combination in 1½ hours.

King and Brenaman Co., Oakville, Ontario, Canada, makes good use of steam cleaners in freezing weather. In the winter, heavy equipment formerly accumulated mud which froze during the night and caused cable breakage the next day. They eliminated this trouble when they set up special crews to steam clean equipment each night—and they saved considerable time over resorting to a pick and shovel in removing this accumulation.

Sno-Cat with Tires



A variation of the Tucker Sno-Cat produced by its Medford, Ore., inventor employs 24 heavy duty truck tires in place of conventional tracks. The new off-the-highway truck boasts direct drive in all 24 wheels and is capable of moving through deep snow and mud and loose sand.

FACTORY SERVICE

Caterpillar Tractor Co. has available a new D7, D8 and D9 Tractor Guide with more than 75 full color drawings of helpful hints for obtaining optimum service life. Methods of preventing abnormal track wear are discussed in detail. Instructions for maintenance of seals, proper track adjustment and lubrication are illustrated. Specific directions show operators how to keep steering clutches, hydraulic boosters, control levers and brake components in best working order. Emphasis is placed on the correct adjustment of oil-type flywheel clutches and control lever operation.

Guide discusses the importance of additive oils, use of the service meter, the use of filter elements, proper methods for lubricating track rollers and idlers, and service of cooling systems. A list of general facts are given for starting and stopping tractors, purchase of fuels, stopping the diesel engine, working adjustments and daily care. Rebuilding recommendations for worn pistons, idlers, links, rollers and sprockets are given. Free copies are offered.

International says certain valve troubles can usually be traced to a particular cause. Valve warpage, burning and pitting may be traced to improper seating. This is caused by exhaust blow-by and can generally be traced to hard particles of carbon being present on the slopes of the valve seats. It can also be caused by weak springs, insufficient valve clearance or misalignment of the guide springs. Warpage generally occurs on the valve stem due to its exposure to heat. Out of round wear will follow where the seat has been pounded by a valve out of alignment. Insufficient cooling or restricted cooling can cause warpage of the valve train or the crankcase and result in similar failures. Improper tightening of the cylinder head can cause improper valve settings and resultant failures.

Euclid has prepared two PM kits, one for overhung scrapers and the other for crawler tractors. It's a relatively simple program, but if followed, it will reduce maintenance costs and promote production. Euclid suggests that while the fix-it-when-it-stops running theory may cut corners for the time being, it costs more maintenance hours and more dollars in the long run. The PM program suggested establishes a systematic procedure of vehicle and maintenance based on 100-hr intervals. Maintenance check sheets list all necessary operations over a 4000-hr period. Sheets provide a complete record of all inspections, adjustments and repairs. They also provide a record of the cost of replacement parts and the time required for repairs.

Larger engines have a tendency to be cranky on cold starting, and some operators make it a habit to accelerate the engine in order to speed up the warm-up period. For this reason service personnel should emphasize to the operator the need for proper warm-up. The engine should be brought up to operating temperature gradually. It should be allowed to run at a fast idle for three or four minutes while the operator checks oil and air pressure. After this three or four minutes of fast idling the engine should be increased in rpm and run a while to allow the oil to flow freely, and piston liners, shafts and bearings to expand slowly and evenly before the engine is put under load.

Since the operator is the only one able to observe cooling system temperatures under load condition, he should be instructed to watch for the possibility of engine over-cooling. Should the coolant run below 160° under normal operating conditions, the vehicle cooling system should be checked—particularly the thermostat—to see why the engine runs cooler than normal.



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FLEET

FUELS

HIGH

INDUST

Where to find it . . .

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CHIPPEWA RIDES HIGH ...with units like these handsome, husky Mack Diesels. Chippewa's recent swing to Macks typifies a trend among truckers ...who are solving the problems of increased running costs by turning to the ton-mile economy champions—Mack trucks.

Chippewa's surefire success formula: the finest drivers ... in the finest trucks

Chippewa Motor Freight, Inc., of Wisconsin, picks only the finest of drivers. Proof? James H. Davis, crack Chippewa driver who won first prize in the five-axle combination class at the ATA's National Truck Rodeo in Chicago.

Chippewa also makes a policy of picking the finest of trucks. Proof? The 22 Mack B-61 Diesels in their fast-growing fleet. Concerning these Macks, President

F. W. Babbitt has this to say:

"In every single way you can measure truck performance—in on-time dependability, in low fuel consumption, in rock-bottom upkeep outlays—our Macks stand out as the greatest bargain in trucks today."

You'll win prizes too—in the form of higher truck earnings—when you join the swing to Macks. Ask your Mack dealer soon for the



CHAMPS GET TOGETHER. Here's James H. Davis, Chippewa driver who took first prize in the "big rig" driving contest at the National Truck Rodeo this year. Right behind him is the Mack C.O.E.—a champion in its own right—which he piloted to top honors.

names of nearby Mack users who are cashing in on the earning superiority of their Macks. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

MACK
first name for
TRUCKS 5657

Off-highway and highway fleet managers find they save through reducing spare tire inventory and cutting time needed to change tires

Two-Piece Valves Cut Tire Costs

▼ OFF-HIGHWAY and highway fleet managers find they can cut costs through use of O-ring two-piece tire valves. They accomplish this through reducing spare tire inventory, saving time on tire changes.

The two-piece valve was first designed by Dill Mfg. Co., Cleveland, Ohio, for use by off-the-highway fleets where damage to valves is high because of dirt, rocks and rough terrain damage. Now they are in use for both tube-type and tubeless tires off and on the highway.

Here's how two-piece valves help cut tire and tube costs:

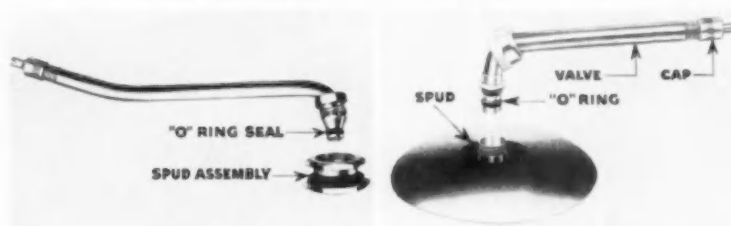
On the rear duals, both valves must point outboard—which means that a tire, tube and valve used for the outside dual cannot be mounted as an inside dual. In some the front tire has a third type valve.

Forgetting tread height, at least two, sometimes three spares are necessary. Many operators sort their tires into 10 classifications of tread wear and match duals accordingly. A standard rule of thumb is one-half spare per truck—or 100 spares for 200 trucks.

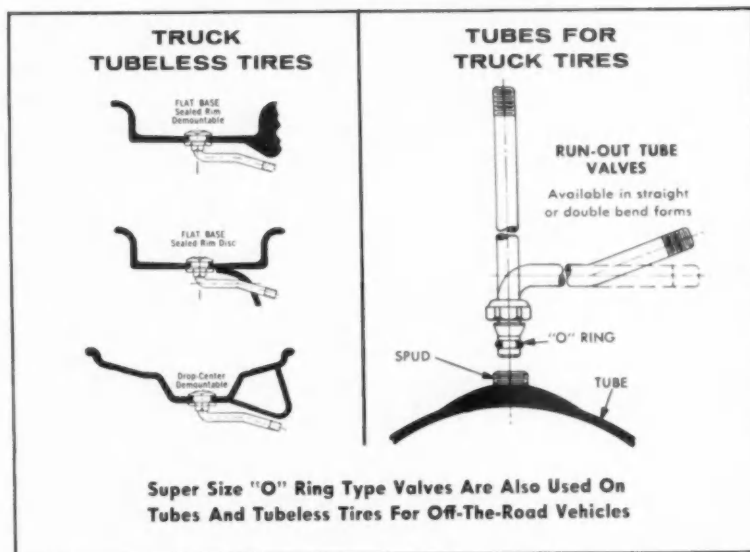
The necessity for maintaining a stock of tubes with valves of special lengths and shapes adds to this inventory.

Additionally, in off-the-road equipment where valve mortality is necessarily high, damage to one-piece units means scrapping the entire tube or vulcanizing on a new valve. If the tube is damaged beyond repair, the valve must go with it as scrap.

... They Look Like This



... And Are Used On



Use of a two-piece tube valve eliminates vulcanization of the entire valve to the tube. Instead, only a small spud is vulcanized to the tube, to which can be attached valves of any shape or length.

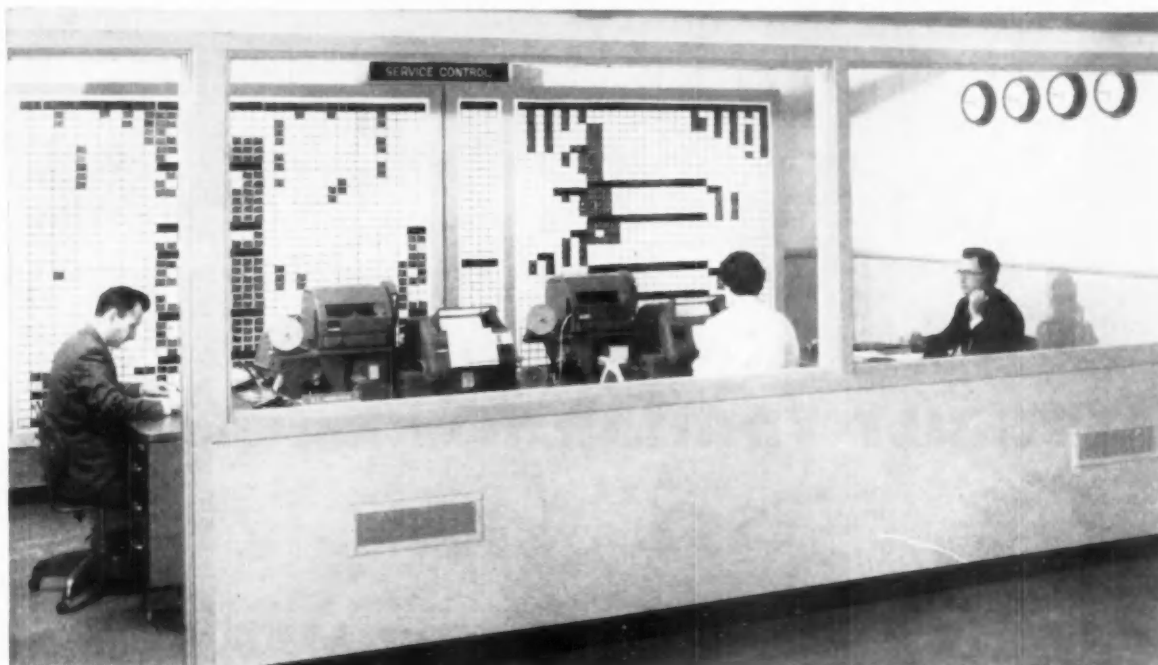
Through the use of the two-piece units, an operator can mount the tube and inflate the tube directly through the spud. After in-

flation, the spud is sealed with a valve cap and put into storage.

When a flat occurs, the vehicle operator removes the valve, and it is screwed into the spud on the spare tire. Or if a valve is damaged it is removed from the spud and replaced with a new valve without dismounting the tire.

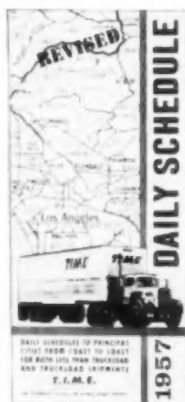
(TURN TO PAGE 116, PLEASE)

HOW BELL SYSTEM COMMUNICATIONS SERVE THE TRUCKING INDUSTRY



From T.I.M.E.'s service control center in Lubbock, Tex., teletypewriter service carries orders that keep 380 OTR units perfectly distributed among terminals.

Private line teletypewriter service helps make T.I.M.E.'s timetable work



The T.I.M.E., Inc., daily schedule for shippers is still industry news. But the story behind the headlines is Bell System private line teletypewriter service.

These communications, linking 18 T.I.M.E. terminals along 3506 miles of highway, permit such tight control of scheduling that shippers know arrival times to the day.

The Lubbock, Tex., dispatcher directs the entire system, shuttles units among terminals to maintain the best distribution of equipment. All dispatch orders, "customer service" (OS&D), tracing and maintenance information speed throughout the system from Los Angeles to Atlanta by teletypewriter.

Fast communications, designed, supplied and maintained by the Bell System, can keep you in step with the faster tempo of business. A representative will gladly explain how. Just call your Telephone Company business office. No obligation.

BELL TELEPHONE SYSTEM



PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER • DATA TRANSMISSION SYSTEMS
CHANNELS FOR: REMOTE METERING AND CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV

COMMERCIAL CAR JOURNAL, December, 1957



"Deadheads are less of a problem now," says T.I.M.E. executive Vice President Loyd M. Lanotte. "Teletypewriter service helps us match load for load to reduce empty miles."



Trailer comes in both step-floor, high cube model and in level floor unit

AEROBILT TRAILER Has Independent

V GRUMMAN AIRCRAFT Engineering Corp. has designed a trailer with independent wheel suspension. It's being built by Aerobilt Bodies (a Grumman subsidiary) in Athens, N. Y. Other features include . . .

- High cube—2180 cu ft in 35-ft model.
- Light weight—8100 lb including aluminum alloy disc wheels and 10.00 x 20 tires.
- Both level floor and drop frame models.

Suspension system is a

"Torsilastic" unit developed by B. F. Goodrich Co. Principal feature is the "spring" component. This is made of two tubes, one inside the other. Inner tube is steel, the outer is aluminum alloy. The space between the tubes (11/16 in.) is filled with rubber, bonded to both tubes.

Outer tube has three sections—outer ends and center—attached to the chassis. Two other sections—just inside the wheels—attach to a load distribution linkage system. This comes into play when about 20 per cent of maximum axle load is reached.

Four trailing arms—one for each pair of wheels—are clamped tight to the inside tube.

Mounted on the other end of each trailing arm are two wheel spindles, wheels and brake assemblies, one on each side of the arm. Brake size is 16½ x 4.

There are no conventional axles, and each wheel rotates individually. Aerobilt says road tests show less tire wear due to scuffing on curves or crowned roads when each wheel "chooses" its own speed.

Wheel removal is easy since one wheel of a pair may be rolled up on a block, leaving the other wheel clear of the ground.

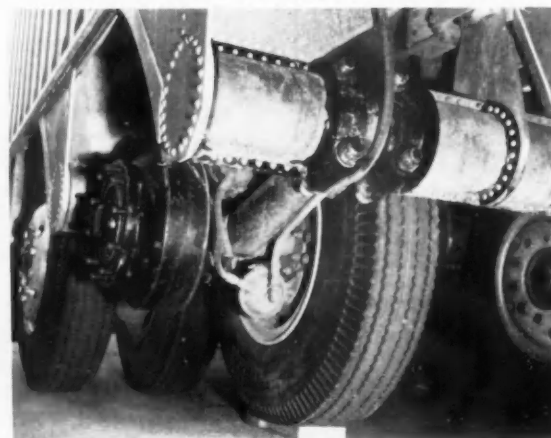
The trailer box is constructed entirely of aluminum. (The only components of the trailer which make use of steel are the landing gear, the fifth wheel pickup, and the suspension system.) Monocoque con-

struction—common in aircraft—was adopted in building the trailer box. In this system, walls, roof and floor of the trailer are the structure rather than merely coverings fastened to a frame.

The box is mounted on a deep section beam backbone. The backbone consists of a channel section (1¾ x 6 in.) aluminum beam running from the transverse landing gear beam to the rear bumper. In the area of the tandem, two of these channel sections are combined to form an I-beam, supplemented by additional beams placed outboard on both sides.

Floor consists of aluminum alloy "planks" which are laid transversely. The planks are riveted to the longitudinal beam and to the special section aluminum side beams which run the full length of the trailer body. The side beams also serve as rub rails.

Each tire is on separate wheel, can be changed easily by rolling other wheel onto block which lifts the flat tire clear of road. Duals hang from "Torsilastic" unit



Conventional axles are eliminated as each pair of wheels in the tandem suspension are clamped separately to Goodrich "Torsilastic" unit. Trailer box is all-aluminum of "monocoque" construction, has no frame

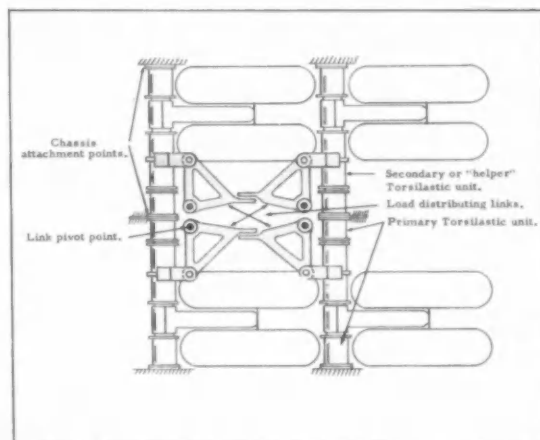
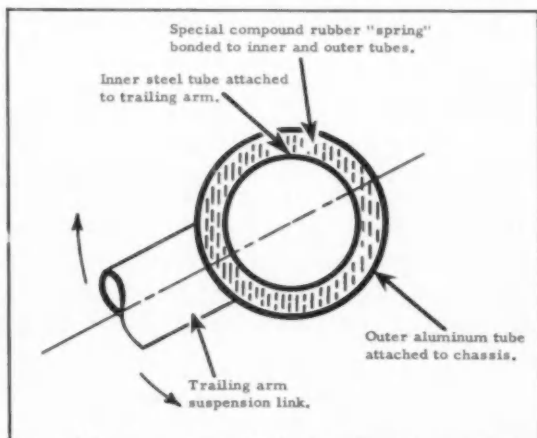
Wheel Suspension

The floor planks are each $2\frac{3}{4}$ in. deep and $8\frac{7}{8}$ in. wide. Tongue and groove joints connect adjoining sections.

This transverse flooring eliminates cross sills. Butt joints also are eliminated and the floor seams run crosswise. If desired, wooden special section beams may be substituted at intervals to provide for nailing area requirements. In the area over the tandem the floor planks are replaced by a $\frac{1}{4}$ -in. thick aluminum sheet in order to allow a maximum clearance for wheel travel.

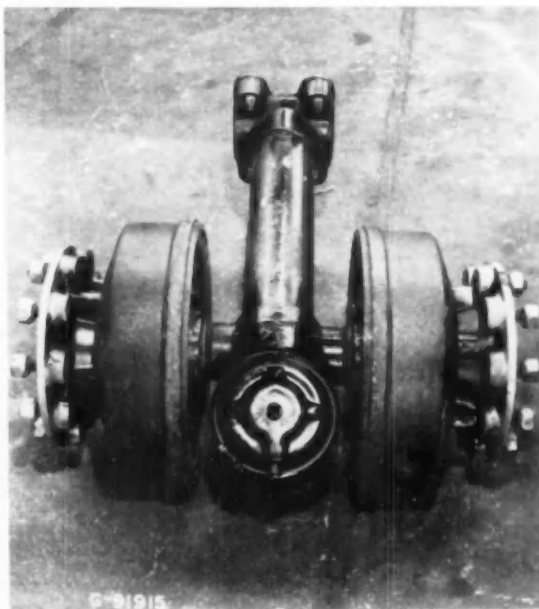
The double rear doors of the trailer are hung on slotted hinges and are of sandwich construction. The inner and outer surfaces of the door are sheet aluminum foil making a total
(TURN TO PAGE 116, PLEASE)

"Torsilastic" unit gets its spring from special rubber compound bonded between an inner steel tube attached to trailing arm and an outer aluminum tube fastened to body



Outside aluminum tube of "Torsilastic" unit also attaches to a load distribution linkage system that comes into play when axle load reaches 20 per cent of maximum capacity

Trailing arm unit holds two wheel spindles, wheels and $16\frac{1}{2}$ x 4 brake assemblies, one on each side of the arm. A single diaphragm and push rod activates both brakes





10¢-a-mile total operating

Bekin Van's GMC Diesel has piled up 170,000 miles a year at less than $\frac{2}{3}$ rd normal running costs

THAT 10¢-A-MILE FIGURE includes everything: Fuel, oil, tires and tubes, maintenance—including a good preventive maintenance program—and depreciation write-off. So it's easy to see why Truck #C413 is considered cock-of-the-walk in Bekin's giant

1300-unit fleet. "Its record is even more eye-opening when you realize that only 3.8¢ of that 10-cents-a-mile figure covers all maintenance—right down to the rig's share of shop and garaging facilities," Fleet Superintendent Clint Holeman reports.

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GM

COM



GMC Money-Makers available in models from $\frac{1}{2}$ to 45 tons

g costs over a Million Miles!

The truck's had no patsy run, either. Ever since it went to work in 1951, it's made steady round trips between Hollywood, California—home base—and Las Cruces, New Mexico. That's 700 miles each way—most of it either climbing tough mountains or crossing scorching deserts. Relay drivers keep it moving 24 hours a day—day in, day out. And it *still* has its original Diesel power plant.

What's more, Bekin's report is one of many GMC Diesel success stories. From coast to

coast, haulers are reporting eye-opening performance and economy. Result: Top truckers are *ordering* and *re-ordering* GMC's by the score—particularly the great new DF860 with new Super-Economy Diesel engine.

For the GMC Money-Maker Diesel that's made for your job—all the way up to 90,000 GCW—see your GMC dealer!

GMC TRUCK & COACH
A General Motors Division

GMC—America's Ablest Trucks



Functional fiberglass grille is combined with new 7½-in. deep, full width, heavy-duty front bumpers to give 1958 models flattened contour with shorter over-all cab length

Studebaker Describes '58 Truck Line . . .

Four engines—two V-8's and two 6-cyl models—give light and medium trucks a range of horsepower from 92 to 192

FOUR ENGINES are offered for Studebaker trucks in 1958. A 259-cu in., 170-hp V-8 is offered in the ½ and ¾-ton models and a 289-cu in., 182-hp V-8 is used in the heavy-duty units and as optional equipment for the 2-ton medium-duty model. This engine also is optional in the 1 and 1½-ton models. Optional four-barrel carburetion will widen power choices available, increases horsepower to 178 for the 259-cu in. and to 192 for the 289-cu in.

Two 6-cyl engines are available in the light-duty models—the 185-cu in., 92-hp and the 245-cu in., 106-hp power plants.

A 2-ton heavy duty model with 102-in. bumper-to-back-of-cab dimension permits accommodation of a 35-ft round-nose trailer within a 45-ft overall length limit.

Power brakes will be offered on models in all weight

Studebaker 1958 Engine Specifications

Displacement (cu in.)	Cyl	Hp	Torque (lb-ft @ rpm)
185.6	6	92	.....
245.6	6	106	.....
259.2	V-8	170 ¹	250 @ 2800
289	V-8	182 ²	288 @ 2600

¹—178 with optional power pack. ²—192 with optional power pack.

classifications. The booster for light-duty usage is a 6¾-in. Hydrovac. Linkage-type power steering will be available for the first time in the line.

The non-slip "Twin Traction" safety differential—which Studebaker-Packard pioneered—again will be optional equipment on the ½-ton models. The differential divides power between the rear wheels so that up to 80 per cent of engine torque goes to the wheel

(TURN TO PAGE 148, PLEASE)

1 The steel for the bearing back is to our specifications for strength and bonding qualities.

2 The pure copper-lead lining of sintered metal powder was developed for heavy-duty service.

3 Stability of the lining alloy is assured by addition of the brass barrier.

4 Both bearings and shaft are protected during the break-in period by this lead-tin overplate.

5 Overall resistance to corrosion is provided by this pure tin flash plating.



The sintered bearing that was created to give you more mileage in fleet operation

Most bearings look alike on the surface. You have to look *inside* to see why Federal-Mogul sintered copper-alloy bearings give you more mileage, more profitable operation. They are built to handle the combination of load, speed and temperature conditions in heavy-duty operation. The patented, pure

metal powder combines copper's strength and lead's "softness" in correct proportion for a new degree of bearing efficiency. That's why fleets **PREFER** Federal-Mogul sintered bearings. Call your Federal-Mogul jobber for prompt service.

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.
DETROIT 13, MICHIGAN

RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE

COMMERCIAL CAR JOURNAL, December, 1957



International Offers "Slim" COE Tractors

A LINE of cab-over-engine truck tractors with 48-in. bumper-to-back-of-cab dimension has been put in production by the motor truck division of International Harvester Co.

Designated the "Sightliner"

models, the "slim" trucks are offered in the ACO-190, 200 and 220 series. They are available in GVW ratings from 24,000 to 30,000 lb and come in five wheel bases—98, 104, 116, 128 and 140 in.

Powerplants already available are the International heavy-duty V-8 gasoline or LP gas engines, with diesel power scheduled at an early date.



Increased visibility

was attained through the use of two tinted glass windows below the regular windshield at about floor level.

International claims its new COE line permits:

- The use of longer trailers without exceeding overall length restrictions.
- Installation of longer bodies on straight trucks which may be used to pull four-wheel trailers.
- Advantageous use of two identical semi-trailers with dolly for "doubles" operation.
- Operation of dromedary units.
- Increased payload weight on front axle.
- Maximum gross payloads in areas where bridge-formula restrictions are in effect.

The hydraulic cab-tilting mechanism is electrically controlled. Sleeper cab, power steering, a number of transmissions and rear axles, and a selection of springs are among the options available.

Fruehauf Sliding Tandem Has Spring-Loaded Pins

FRUEHAUF Trailer Co., Detroit, has developed a sliding tandem underconstruction which its engineers state is lighter and stronger than other Fruehauf tandems.

They weigh on an average of about 100 lb less than the rubber-ride unit which was developed particularly for strength with light weight.

Other advantages

of the new underconstruction, Fruehauf says, are superior brake geometry, absence of lubrication fittings, adjustable radius rod on one side with one-piece radius rods on opposite side, bonded metal mountings, improved spring location directly under the body and greater stability due to level radius rods.

Arrows No. 1 and No. 2

indicate the two spring-loaded locking pins that lock the suspension directly to both the hat-shaped suspension supporting members.

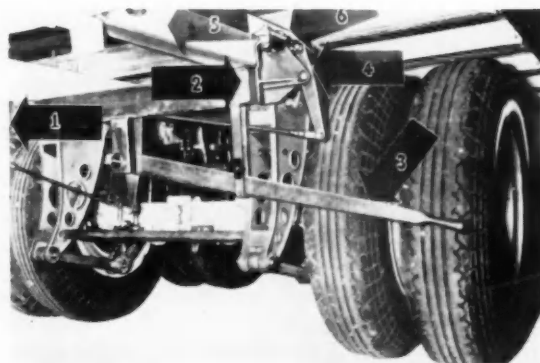
Arrow No. 3 shows the handle of the locking control level, shown in the depressed position.

Arrow No. 5 is one of the hat-shaped supporting members.

Arrow No. 4,

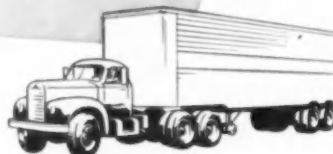
indicates the spring-loaded locking pins, designed to keep engaged even if the actuating mechanism were shorn off due to any unforeseen emergency.

Arrow No. 6 indicates one of the four heavy-duty clamps which anchor the suspension to the hat-shaped member.



Only **MIDLAND** Goes Beyond ICC Braking Requirements With All These Positive-Plus Features!

Have you converted your tractor-trailers to comply with the new ICC emergency braking regulations? If not, be sure to specify Midland equipment, for only Midland gives you all these **EXTRA SAFETY AND ECONOMY FEATURES** — in addition, of course, to the basic ICC requirements.



ICC Requires that . . .

Tractors must be equipped with two means of activating the emergency feature of the trailer brakes.

Tractor brake system must be protected against air loss in the event of trailer breakaway or leakage in trailer system.

All new trailers must have a "no-bleed-back" emergency relay valve to prevent back flow of air from reservoir through supply line.

MIDLAND Gives You These **PLUS** Features . . .

● **MIDLAND DASH CONTROL VALVE** applies and releases trailer brakes as fast as service brake.

● **MIDLAND DASH CONTROL VALVE** is pull-type to eliminate accidental application.

● **MIDLAND DASH CONTROL VALVE** provides visual indication whether or not trailer system is charged.

● **MIDLAND DASH CONTROL VALVE** provides automatic application below low pressure warning point so that vehicle can clear traffic lanes.

● **MIDLAND TRACTOR PROTECTION VALVE** can be installed on your present shut-off cock brackets.

● **MIDLAND TRACTOR PROTECTION VALVE** has rugged mounting for protection on breakaway.

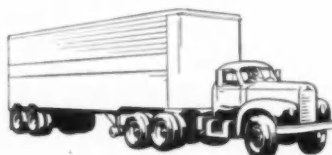
● **MIDLAND TRACTOR PROTECTION VALVE** works with all types of emergency relay valves.

● **MIDLAND EMERGENCY RELAY VALVE** is large capacity for fast application and release.

● **MIDLAND EMERGENCY RELAY VALVE** eliminates danger of vehicle drive-away without sufficient air in system.

● **MIDLAND EMERGENCY RELAY VALVE** is easily serviceable without removal from vehicle.

● **MIDLAND EMERGENCY RELAY VALVE** gradually applies the trailer brakes in the event of loss of air below 45 psi.



Ask your nearest Midland Distributor for complete information on equipping your tractor-trailers to comply with the latest ICC braking regulations. He'll welcome a chance to serve you.

THE MIDLAND STEEL PRODUCTS COMPANY

OWOSSO DIVISION • OWOSSO, MICHIGAN
Export Department: 38 Pearl Street, New York, N.Y.



Kenworth Introduces Three Cab-Over-Engine Tractors

KENWORTH tilt cabs are being produced in three sizes of the cab-over-engine design—the COE-73 with sleeper, the 86-in. COE with larger sleeper, and the COE-54 without sleeper. All are built of aluminum.

The tilt cab goes forward to a 55° angle to allow accessibility for lifting out the engine and transmission easily. The cab is tilted forward by means of two hydraulic rams, one on each side of the cab. The rams are powered by a double-acting hydraulic pump. It is hand operated.

Pumped up past

the balance point, the tilted cab is held in place at the 55° angle by an automatic safety hook.



To return the tilted cab to the driving position, the safety hook is raised, the valve opened, and the cab pulled back past the balance point. As the cab returns to the driving position, the safety hook automatically re-catches.

The main cab lock

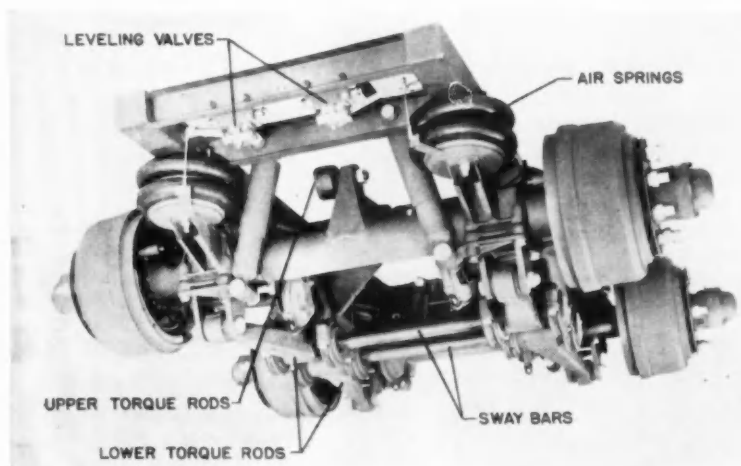
is a steel cam-action device. An additional spring loaded safety hook doubly secures the cab in its driving position. The extra hook is designed to remain effective even if its spring should break.

The inside of the hood is riveted together in one piece with no loose parts—for quiet operation, says Kenworth. The low pivot point—right on top of the frame rails—makes the one piece cab possible, the company claims.

Steering wheel height

is adjustable through the placement of a slip-joint, allowing the driver to adjust the wheel to the height he prefers.

Trailer Air Suspension Introduced by Clark



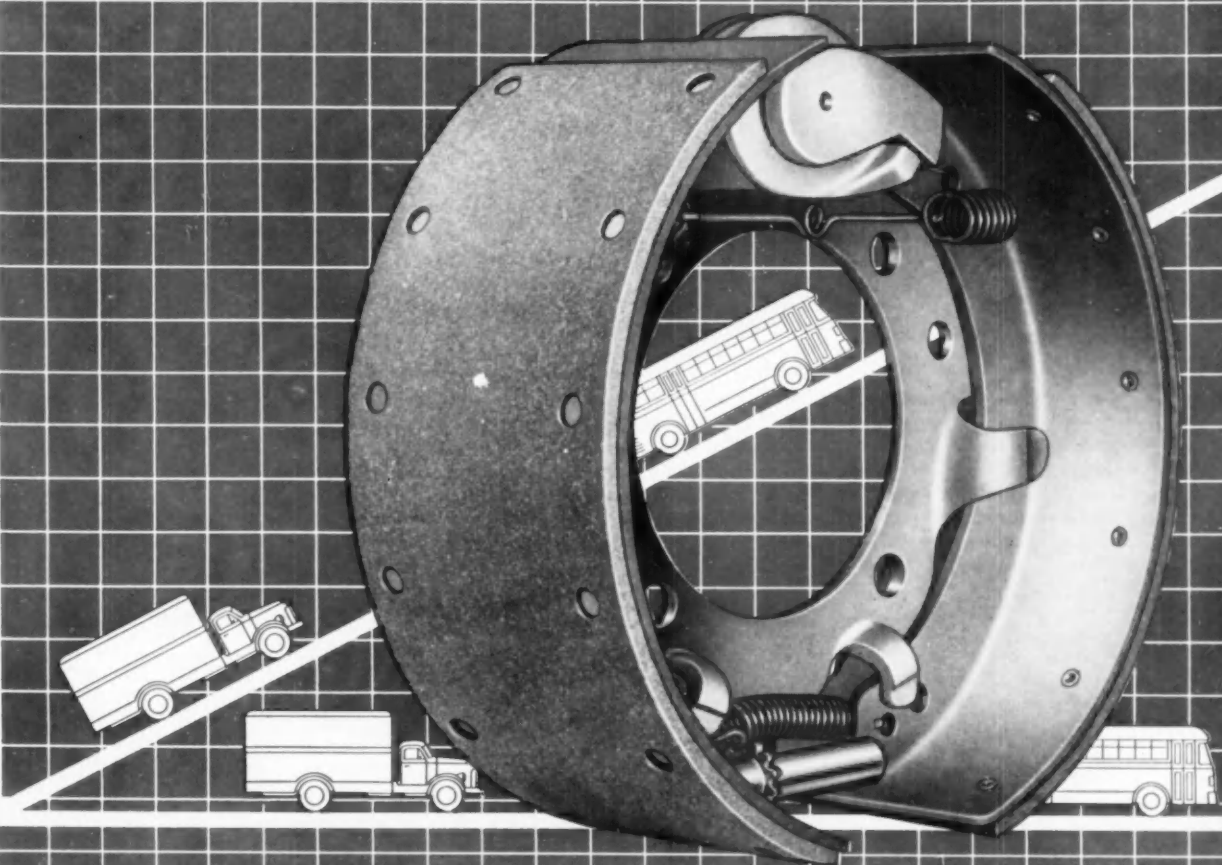
CLARK EQUIPMENT Co.'s Automotive Division, Buchanan, Mich., has introduced a semi-trailer air suspension system with integrated air reservoirs and sway control features.

The units are available in single axle models of 18,000 and 20,000 lb capacities and tandem models of 32,000 and 36,000 lb capacities. Each is offered in packaged assemblies of frame, air springs, reservoirs, shock absorbers, filters, leveling valves and sway bars for installation on new equipment or on operating trailers. Parts for single and tandem models are interchangeable.

Air reservoirs

are integral parts of the unit. Air is delivered to each reservoir by a common line from the tractor's compressor. Each reservoir in turn serves one side of the air suspension independently of the other. Clark engineers claim the trailer bed remains level both laterally and vertically under all load conditions.

Built-in sway bars are used to control lateral roll. Two lower torque arms and an upper torque rod maintain and position the axles laterally and absorb brake torque.



BENDIX DUO-DUTY AUXILIARY BRAKE

Power to hold on grades . . . Power to stop at road speeds

The Bendix* Duo-Duty auxiliary brake serves the double purpose of a positive parking brake and an emergency road-speed brake.

FOR PARKING, the Duo-Duty brake has ample torque capacity to keep the braked wheels from rolling on any hill or ramp, regardless of how steep.

FOR EMERGENCIES, it has the torque and thermal capacity to serve as a dependable stand-by brake

at road speeds should the main braking system, for any reason, fail to work.

Minimum physical pull at the hand lever, less weight, fewer parts, mechanically simple.

A heavy-duty drive shaft brake that is rugged and right . . . built and backed by Bendix.

*REG. U.S. PAT. OFF.

**BRAKES • POWER STEERING • POWER BRAKING • CONSTANT VELOCITY
UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS**

Bendix PRODUCTS DIVISION **South Bend, IND.**

Export Sales and Service: Bendix International Division,
205 East 42nd Street, New York 17, N. Y.





Truck for the Weekend

GMC Truck & Coach Division pulled an interesting switch on the '58 model announcement. Instead of taking editors to the truck, they brought the truck to the editors. Here's part of CCJ's home office gang (l to r: Rawson, Forest, Hamilton and Colgan) as we began our profitable truck-for-the-weekend tour. After 200 miles we were just about ready to trade in our cars.



Sweptside Sweeties

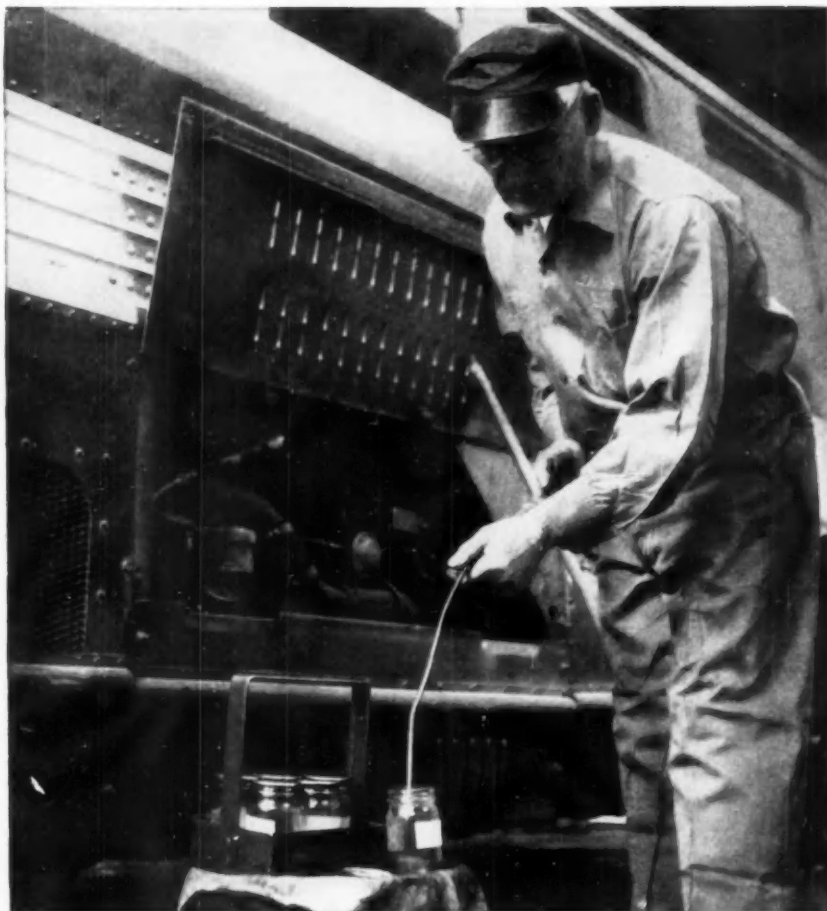
One reason newsmen won't soon forget the Chrysler Corp. press preview in Miami is this "Sweptside Dodgeful" of Eastern Airlines Stewardesses. The parade of new model passenger cars was routine. But when the trucks appeared, each was piloted by a dame! Spectators began to wonder who was doing the flying? But nobody seemed to care when this official photograph was made.

Accident Rate for 1956-57 Shows Four Per Cent Drop over 1955-56 Contest Year

National Safety Council's 1956-57 Fleet Safety Contest produced these accident rates for different types of fleets. How does yours compare?

	YEAR - JULY 1, 1956-JUNE 30, 1957				ACCIDENTS PER 100,000 VEHICLE MILES				Changes 1955-56 to 1956-57
	No. of Fleets	No. of Vehicles	Veh. Miles (thousands)	No. of Accidents	1956-1957	1955-1956	1954-1955	3 Years 1954-57	
TOTAL	1,888	237,181	5,080,898	76,594	1.51	1.58	1.44	1.50	- .08
TRUCKS	1,371	150,298	3,260,862	51,329	1.59	1.63	1.29	1.50	- .38
Common Carrier - Intercity	130	12,119	912,281	5,448	.60	.71	.85	.72	-15%
Common Carrier - City	90	5,917	68,665	5,001	7.28	8.31	7.17	7.59	-12%
Common Carrier - Suburban	7	460	7,274	318	4.37	5.39	---	4.94*	-19%
Private Carrier - Intercity	64	2,243	84,985	676	3.21	3.21	1.02	.95	- 2%
Private Carrier - City	39	1,501	20,904	671	3.21	3.17	2.74	2.95	+ .18
Private Carrier - Suburban	46	1,632	23,684	518	2.19	2.19	---	2.19*	0
Contract Carrier - Intercity	6	159	7,780	158	2.03	---	---	---	---
Contract Carrier - City	42	1,294	16,238	930	5.73	4.92	4.63	4.99	+16%
Contract Carrier - Suburban	21	556	7,992	249	3.12	---	---	---	---
Petroleum - Intercity Marketing	33	2,721	127,492	1,047	.82	.80	.93	.85	+ .38
Petroleum - City Marketing	36	3,021	55,901	897	1.60	1.87	1.58	1.68	-14%
Petroleum - Refining	12	585	6,179	53	.86	1.03	1.04	.97	-17%
Petroleum - Production	19	2,014	35,232	191	.54	.52	.66	.57	+ .15
Petroleum - Pipeline	17	1,126	19,850	87	.44	.44	.52	.47	0
Government - Intercity	9	1,603	14,089	52	.37	---	.39	.60*	---
Government - City	33	35,304	377,851	16,963	4.49	4.56	1.25	4.43	- 2%
Government - Suburban	10	1,562	13,313	121	.91	---	---	---	---
Public Utility - Intercity	17	3,930	44,429	503	1.21	1.41	---	1.31*	-11%
Public Utility - City	21	2,616	23,663	613	2.59	1.95	---	2.19*	+33%
Public Utility - Suburban	37	10,082	89,544	1,606	1.79	1.88	---	1.84*	- 5%
Bakery - Intercity	15	1,031	19,926	348	1.75	---	---	---	---
Bakery - City	19	968	13,879	183	1.32	1.71	---	1.54*	-23%
Bakery - Suburban	30	1,654	32,705	397	1.21	1.49	---	1.37*	-19%
Meat Packing - Intercity	15	279	9,494	148	1.56	2.19	2.42	2.20	-29%
Brewing Industry	58	3,728	32,640	1,764	5.10	6.13	6.08	5.77	-12%
Gas Industry	88	28,857	309,067	4,735	1.53	1.58	1.44	1.63	- 3%
Milk & Ice Cream - Retail	94	5,786	50,410	1,377	2.73	3.21	---	2.99*	-15%
Milk & Ice Cream - Wholesale	96	4,015	49,827	1,090	2.19	2.44	---	2.30*	-10%
Milk & Ice Cream - Over the Road	27	1,041	34,800	252	.72	.85	---	.79*	-15%
Milk & Ice Cream - Small Fleets	5	49	628	15	2.39	3.34	---	2.92*	-28%
Truckway	60	9,450	631,575	3,865	.61	.65	.70	.65	- 6%
Drivesway	33	1,874	71,966	627	.86	.92	.83	.87	- 7%
Small Fleets - Commercial Intercity	67	573	21,478	153	.71	.85	.90	.81	-16%
Small Fleets - Commercial City	44	358	5,086	133	2.62	3.26	2.83	2.95	-20%
Small Fleets - Commercial Suburban	31	220	3,035	50	1.65	---	---	---	---
BUSES AND TAXICABS	83	9,011	479,944	15,066	3.13	4.41	4.57	3.82	-29%
Bus - Intercity	30	3,363	271,613	3,036	1.12	1.41	.84	1.13	-21%
Bus - City	39	4,944	168,030	10,111	6.20	6.12	6.17	6.16	+ .15
Bus - Suburban	9	319	10,826	456	4.21	---	---	---	---
Taxicabs	5	385	29,475	1,403	3.74	3.85	---	3.80*	- 3%
COMMERCIAL PASSENGER CARS	286	64,758	983,025	4,968	.51	.57	.97	.63	-11%
Eastern	118	36,892	525,153	3,066	.58	.70	1.12	.75	-17%
Western	139	27,654	455,040	1,869	.41	.44	.77	.49	- 7%
Small Fleets	29	212	2,832	33	1.17	.90	.32	.97	+30%
POLICE	148	11,114	377,067	5,721	1.40	1.52	1.30	1.41	- .04
Municipal - Patrol Cars	62	5,118	138,673	3,663	2.82	2.96	3.00	2.90	- 5%
State - Patrol Cars	18	5,774	225,973	995	.44	.50	.51	.48	-12%
Motorcycles - Two wheeled	22	1,498	15,661	448	2.86	3.53	4.66	3.39	-19%
Motorcycles - Three wheeled	23	537	3,430	131	3.82	4.43	3.45	3.95	-10%
Small Fleets	23	157	2,330	54	2.32	2.93	1.97	2.42	-21%

* Average rate for two years only.



Gustav E. Heiber, Vice President in Charge of Maintenance, instituted oil sampling program in 1949. Found Cities Service C-300 Motor Oil can be used five times as long as previously customary.



Centrifuge Test is one of series which determine properties and impurities of oil after use in B&W buses. Samples are taken at 2000 mile intervals from each coach.

30,000 miles between oil changes! 400,000 miles before overhaul!

B & W Lines finds oil sampling and Cities Service lubrication pay off



The 51 buses of The B&W Lines roll up about 2,500,000 miles per year, serving Boston, Worcester and points between.

Yet, with all of this mileage, B & W buses are setting phenomenal performance records, thanks to a unique oil sampling and maintenance program combined with Cities Service lubrication.

Prior to this sampling program, oil was changed every 4000 to 8000 miles. Now, with sampling and Cities Service C-300 Motor Oil, crankcases are drained every 30,000 miles on gasoline units and every 20,000 miles on diesel units.

Samples are taken from the engines every 2000 miles to determine the oil's viscosity, amount of asphalt, water, solids, metal, and acidity. But they have actually determined far more . . . for they've proved

that Cities Service C-300 Motor Oil can effectively lubricate for far longer periods than ordinary motor oils . . . and still lengthen periods between overhaul.

B & W's A.C.F. and Twin Coach gasoline units are now rolling up 350,000 to 400,000 miles between overhauls!

This experience clearly demonstrates what can be achieved through scientific lubrication practice and Cities Service Lubrication. If you'd like recommendations for your operation, talk with a Cities Service Lubrication Engineer from the nearest Cities Service office. Or write: Cities Service Oil Company, Sixty Wall Tower, New York 5, N. Y.

CITIES  SERVICE
QUALITY PETROLEUM PRODUCTS

December News Roundup

Fleetmen were told

by speakers at the 45th Annual National Safety Congress in Chicago recently:

Age, attitude, health, driving experience, schooling and money habits are traits to consider in a driver, said J. W. Lumpkin, safety manager, Railway Express Agency, New York City. Those traits should influence the decision to hire or not to hire, he said. (To see this rule in use, see Dowell, Inc., Part III, this issue, page 80.) Lumpkin continued, "The traits help determine whether a prospective driver will drive safely. . . . And your decision is the controlling factor in stopping accidents at the hiring line."

Dr. Brittain F. Payne blamed poor eyesight as a basic cause of traffic deaths. Dr. Payne is clinical professor of ophthalmology, New York University Medical College. He suggests giving persons with bad vision limited driver licenses. For those with red-green color blindness, he would restrict driving to daylight hours. And for persons with poor depth perception, night driving should be restricted.

Trucking industry paid

more than \$35 billion in 1956 for fuel, wages, new equipment, and other goods and services, according to "American Trucking Trends—1957." The annual statistical report is prepared by the Dept. of Research, American Trucking Assns.

It reports a 300 per cent gain in ton-miles hauled in the last decade. The report also showed the growth of the industry from 700 trucks in 1904 to over 10 million last year.

The average wage paid in the industry last year was \$5346. That compares with a \$4049 average for all private industry. "Trends" also points out that the industry paid \$252 million more in taxes in 1956 than the total for 1955. The total bill—\$2,229,000,000.

1957 Domestic Truck Factory Sales by GVW

	6,000 lb. and less*	6,001-10,000*	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	26,001-33,000	Over 33,000	Total
January	42,027	10,018	1,836	7,203	3,514	3,099	2,932	2,579	73,208
February	37,847	11,292	2,391	10,407	3,023	3,139	2,795	2,799	73,693
March	39,622	11,272	2,438	8,362	3,389	2,691	2,935	2,814	73,523
April	39,176	12,954	2,945	13,003	5,726	3,973	3,271	2,362	84,410
May	38,830	12,813	3,614	12,164	5,769	3,541	2,979	3,220	82,930
June	36,819	11,717	3,076	10,638	5,585	3,450	2,602	2,972	76,859
July	37,748	10,446	2,629	10,429	5,806	4,412	3,010	2,376	76,856
August	38,328	10,348	2,542	9,164	5,407	3,647	2,724	2,052	74,212
September	24,073	7,392	1,530	5,674	4,070	3,268	2,836	2,153	51,016
Total—9 Mos. 1957	334,470	98,252	23,001	87,044	42,289	31,240	26,084	24,327	666,707
Total—9 Mos. 1956	278,964	118,990	26,212	118,705	42,199	37,307	54,304	**	676,661

* Prior to Jan. 1957, vehicles below 10,001 G.V.W. were grouped as follows: "5,000 and less" and "5,001-10,000."
** Included with 26,001-33,000 group. Source: Automobile Manufacturers Assn.

Motor vehicle industry

buys between \$5 and \$6 billion worth of automotive products from other industries, reports Automobile Manufacturers Assn.

This represents an estimated factory employment of 330,000 or more. Added to the 790,000 who work in vehicle, parts, body and trailer building, employment for total production goes over the 1.1 million mark. This data was released in AMA's annual handbook, "Automobile Facts and Figures."

The booklet also points out that special taxes on motor vehicle users reached a peak of \$8 billion in 1956. Taxes make up one-fourth of the delivered price of a passenger car today, AMA states.

An expanded scholarship

program in motor transport management is under discussion by Fruehauf Trailer Co. and Tri-State College, Angola, Ind. Some 23 students are already studying transport management on scholarships. Of these, 17 are Fruehauf scholars.

Tri-State College was the first school to offer a four-year course in motor transport management.

Richard A. Lill

is the new highway engineer for the ATA. He replaces H. A. Mike Flanagan, who joins a firm of consulting engineers. Lill has been an ATA research engineer since 1952.

Nomadic North Carolina

State College Truck Driver Training school finally has a permanent home—after more than eight years of wandering.

The permanent location in Raleigh is immediately behind the college's dairy farm. The 50,000 sq ft area is enclosed and sub-surfaced for teaching starting, stopping, forward-backward exercises, serpentine maneuvering, overhead clearance estimation and parking.

Mack Co. has donated a new diesel truck to the school. A new White

Motor Co. COE is on the way. GMC and Trailmobile have made similar promises.

"Ultra-modern highways"

in the new interstate system may be crowded to capacity before the entire network is completed.

That is the opinion of Guy W. Rutland, president of ATA. He told the Virginia Highway Conference at Lexington, Va.: "Actually, the highways are being built to the standards of a number of good highways in existence today. Supposedly they will handle the volume of vehicles we are supposed to have in use in 1975.

"Almost always . . . such predictions have proved to be too conservative," Rutland said. "Once this program gets fully underway we (TURN TO PAGE 182, PLEASE)

8-Hour Body



Eight man-hours is the time Duralite Mfg. Co., Baltimore, Md., claims is needed to assemble this trailer body. Duralite demonstrated those claims at the recent TBEA convention in Atlanta, Ga. Each afternoon four boys hired in Atlanta, but with no mechanical background, worked against a stopwatch to assemble the knock-down reversible panel aluminum body. Their times—on Monday it took them 1 hr, 23 min, 6 seconds. On Tuesday, 1 hr, 7 min, 14 seconds. And on Wednesday they built it in 50 min, 12½ sec. The young lady above demonstrates how the panels are riveted together.



MOPAR mufflers mean extra miles... built for today's powerful gas surges

Pennies saved on mufflers can quickly turn to dollars lost. Genuine economy lies in demanding a muffler built to stand up to today's powerful gas surges.

Construction of the MoPar muffler, made for the long haul, gives you these major advantages for extra profitable pay-off in operation:

- top rigidity and longer life
- extra strength, less vibration
- greatest safety protection
- quiet operation
- less back pressure

These advantages add up to extra miles, extra long-lived satisfaction. Don't gamble! MoPar mufflers are *official, authentic* Chrysler Corporation products. Order from your MoPar wholesaler salesman or your Plymouth, Dodge, DeSoto, Chrysler or Imperial dealer now.



MoPar Division ➤ Chrysler Motors Corporation
Detroit 31, Michigan

How Far Can Piggy-Back Reefer Go?

Continued from Page 75

Armour's rate is based on a minimum of 30,000-lb load shipped two to four times a week. The rail rate varies between 60 cents and \$1 per cwt. Cost is highest on the Fort Worth-Harlingen run, where the number of trips per week is minimal and railroad-owned trail-

ers are used. Lowest is the Fort Worth-Odessa trip, which has maximum volume and is longer than the other three.

All four of the railroads—the Missouri Pacific, the Texas and Pacific to Odessa, the Chi-

cago and Northwestern to Cedar Rapids, and the Union Pacific to Kearney—publish tariffs covering the movement of piggy-back freight in shipper-owned trailers. Says Matthews, "The actual rate is a matter of negotiation, but there is no reluctance on the part of these lines to do business."

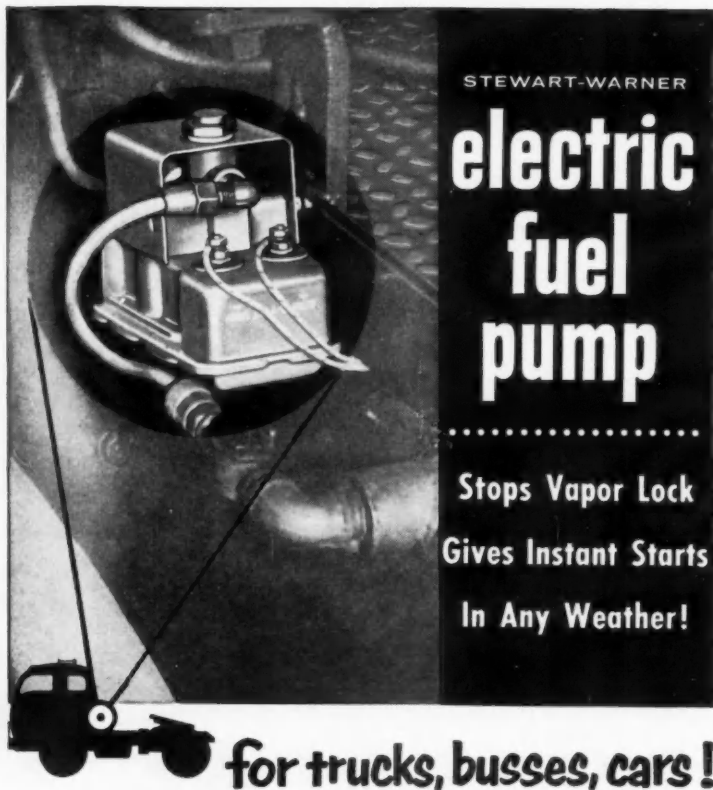
Armour's first venture into piggy-back was between Fort Worth and Odessa in 1954. The Omaha-Kearney shuttle was set up next, about two years ago. The Omaha-Cedar Rapids run has been going about a year, and the one between Fort Worth and Harlingen a few months.

Significantly, Matthews reports, the savings garnered by Armour to date on the first two runs have repaid the entire capital cost of the new trailers that were required.

Previously, when the highway tractor-trailer completed its run, two men required about three hours to switch the load into straight trucks that were employed for delivery. During this entire time—since the loading doors had to be kept open—the meat was exposed to the not-so-tender mercies of the western sun. Although this exposure didn't spoil the meat, it tended to shorten overall storage life. Now, once the meat is loaded at the plant, it's kept under uniform refrigeration until delivery at the customer's door.

Thermo-King Model No. KL-10 gasoline-powered refrigeration units have been installed on each of the trailers used in Armour's piggy-back runs. They provide far more capacity than is actually required, Matthews reports. However, the oversize equipment provides two important advantages. For one thing, the compressor doesn't have to work as hard or as often—which reduces the chance of a breakdown. For another, it takes less time for the temperature inside the trailer, after it has risen to the compressor cut-in point at 37°F to be pushed down to the cut-out point at 32°.

The effect of this factor is to produce a lower aver-
(TURN TO PAGE 108, PLEASE)



STEWART-WARNER
electric fuel pump
.....
Stops Vapor Lock
Gives Instant Starts
In Any Weather!
for trucks, busses, cars!



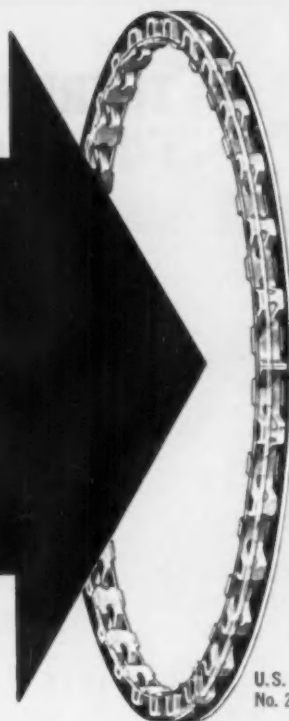
Instrument Division, Dept. UU-127, 1840 Diversey Parkway, Chicago 14, Illinois

- ★ No bellows, pistons or rocker arms to wear!
- ★ Operates independently of engine to assure positive flow of gas—always!
- ★ Heavy-duty construction. Weatherized finish, in bright green baked enamel!
- ★ Models with single or dual pumps!

STEWART-WARNER

This ring PREVENTS OIL WASTE DUE TO HIGH VACUUM CONDITIONS !

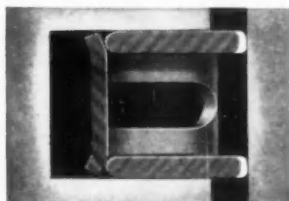
No tension loss at any engine operating temperature • actually hardens in use • has far greater life expectancy than any carbon steel • won't corrode or sludge.



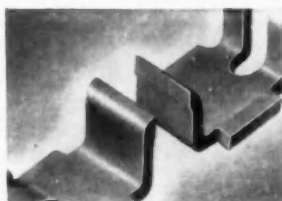
U.S. Patent
No. 2,789,872

American Hammered's **NEW** Stainless Steel Oil Ring!

NEW DESIGN CONCEPTS



Side-sealing — axial pressure of the stainless steel expander forces side rails against sides of groove, prevents oil waste due to high vacuum conditions.



No groove backing. Circumferential pressure of the expander makes the ring conform to the bore without touching the bottom of the piston ring groove.



Maximum oil control. Uniform high radial pressure against the cylinder wall assures efficient oil distribution, exceptional oil control at all times.



Instant seating is assured by American Hammered's way of chrome plating the side rails. Ring breaks in fast, has more than double the life of ordinary rings.

ASK YOUR JOBBER FOR FULL DETAILS

AMERICAN HAMMERED

AUTOMOTIVE REPLACEMENT DIVISION • 2001 Sanford St., Muskegon, Mich.
Manufacturers of American Hammered Automotive Replacement Piston Rings
A Division of Sealed Power Corporation

THERE'S A PERMATEX PRODUCT FOR EVERY MAINTENANCE NEED



SEALING COMPOUNDS Form-A-Gasket No. 1 Form-A-Gasket No. 2 Form-A-Gasket No. 3 Super '300" Form-A-Gasket Pipe Joint Compound No. 51	
SEALANT-CEMENTS Stick-N-Seal Gasket Cement Glass Sealer Indian Head Gasket Shellac Compound	
SHOP REPAIR ITEMS Valve Grinding Compound Prussian Blue	
OILS & LUBRICANTS Penetrating Oil Solvo Rust Toon-Oyl Anti-Seize Compound Indian Head Clear Rubber Lubricant	
POLISHES & CLEANERS Blue-Blazes Silicone Cleaner-Polish Perma-Lustre Cleaner-Polish Acrylic Cleaner & Polish Taroff Car Wash Fabric Cleaner Windshield Cleaner Concentrate Chromium Polish	
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HYDRAULIC FLUIDS Knee Action-Jack-Shock Absorber Oil Hydraulic Jack Oil Heavy Duty Brake Fluid Moderate Duty Brake Fluid Automatic Transmission Fluid (Type A) Hudson Clutch Fluid Indian Head Hydraulic Brake Fluid	

PERMATEX COMPANY, INC.

General Offices: 300 Broadway, Huntington Station, N. Y.
 Factories: Brooklyn 35, N. Y., Kansas City 15, Kans.

getting there
is only half the job!



Copeland refrigeration
does the rest . . . keeps food fresh!

The burro is a patient beast with seemingly no load limit. But he'll never break any speed records, and the perishables he transports will have lost some of their appeal when they reach their destination. Today fleet operators and food processors

know freshness and profit go hand in hand. So they protect in-transit payloads with refrigerated trucks equipped with dependable Copeland units.

You can count on Copeland cooling *all the way* . . . at lowest cost per mile.

SINCE 1918

Copeland

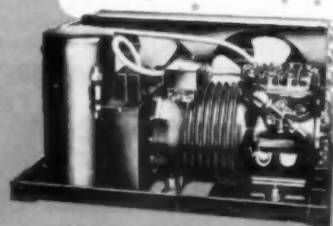
REFRIGERATION CORPORATION, Sidney, Ohio

WRITE FOR SPECIFICATIONS AND PERFORMANCE DATA

CAPACITY Choose from $\frac{1}{2}$ to 3 H.P. in Copelametic, the direct-drive accessible hermetic, and belt-driven models. Model TR-100 shown.

DEPENDABILITY Thousands of Copeland units now in use have given years of trouble-free, over-the-road service — proof of superior engineering, ruggedness and dependability.

AVAILABILITY Our unexcelled coast-to-coast network of 130 wholesalers and over 25,000 refrigeration dealers means the best in service when you need it. It's only a phone call away.



Piggy-Back Reefer

Continued from Page 104

age temperature inside the trailer than would be possible with a smaller refrigeration unit.

With a perishable product like meat, of course, proper temperature is of crucial importance. On three of the four piggy-back runs the rail carrier takes no responsi-

bility for spoilage due to defective refrigeration and is not required to inspect the load en route. Thus, it is necessary for Armour to spend a little more for equipment if the investment reduces the chance of mechanical failure.

Elimination of rehandling also helps delivery operations, since about three hours are cut off total time of the run from packing plant to the retail store.

The experienced packing plant dock crew now packs the meat for delivery at the destination, increasing its space utilization "significantly," Matthews reports.

Shipments are carried to each distribution point by rail in about the same time formerly required in over-the-road operations. Armour gets first-morning delivery in Odessa, Kearney and Cedar Rapids. Second-morning delivery is given in Harlingen. On the first three runs, company personnel drive each trailer to a ramp and onto the flatcar—then let the railroad handle the tiedown. At the other end, Armour's driver unties the rig and takes it off. Shipments destined for Harlingen are loaded into Missouri-Pacific trailers, and driven to the yards by Armour personnel. The railroad then takes over, lifting the box off the road wheels with a crane, and tying the shipment down on the car. At Harlingen, the railroad puts the box back on wheels and turns the assembled rig over to an Armour routeman.

Armour's experience with refrigerated piggy-back also points up some limitations. Matthews puts it this way:

"Within limits we feel piggy-back provides economies and other advantages compared with conventional highway transportation. We have found, however, that TOFC doesn't pay if the destination point is less than 175 miles or more than about 500 miles from the origin."

(TURN TO PAGE 112, PLEASE)

IT TAKES LONG LIVED QUALITY



Those shiny new Rotors and Distributor Caps won't look the same after even a hundred miles. Vibration, knock, bump! Heat, cold, water, oil! How long can they stand it?

TO MAKE LONG TIME PROFITS

There's no profit in a chipped rotor, no protection in a cracked cap. That's why the smart boys insist on replacing with P & D Quality Controlled parts. P & D's rigid control system starts with the raw materials, continues with engineering and production line supervision, winds up with a triple inspection of the finished product.

For the sake of your reputation and your profit make P & D your standard for all ignition jobs.



MANUFACTURING CO., INC.

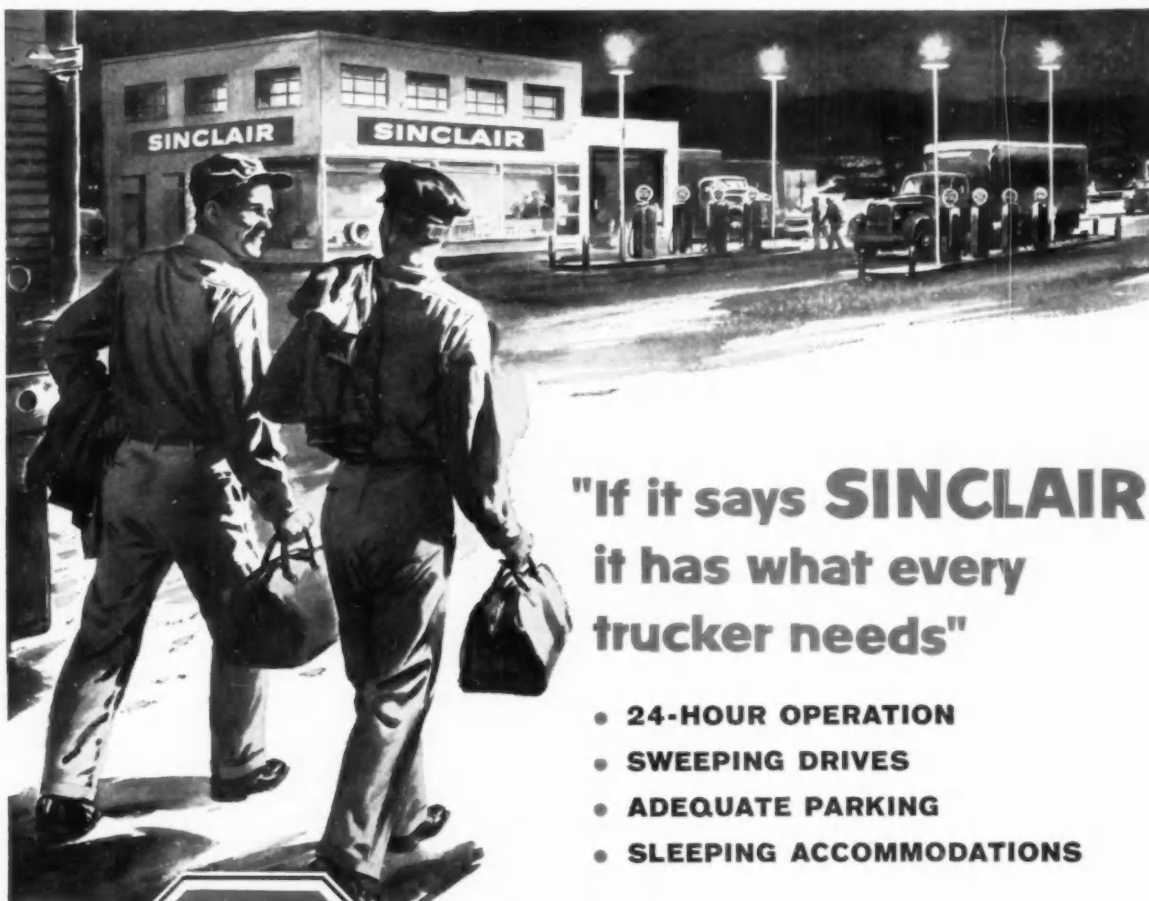
Established 1920

19-02 Steinway St., Long Island City 5, N.Y.

Export Sales: Borg-Warner International, 36 So. Wabash Ave., Chicago 3, Ill.



"And check for an oil leak, too!"



**"If it says SINCLAIR
it has what every
trucker needs"**

- **24-HOUR OPERATION**
- **SWEEPING DRIVES**
- **ADEQUATE PARKING**
- **SLEEPING ACCOMMODATIONS**



Long-distance truckers rely on the modern conveniences at Sinclair-Planned Truck Stops. They're good stops to schedule—to help keep trucks on schedule.

These facilities are typical: 24-hour operation, road service, tire "banks," sweeping drives, spacious parking, repair facilities, etc.

Also, Sinclair planning provides for the physical comfort of drivers... up-to-date shaving and shower facilities, good food, comfortable beds and TV lounges for relaxation.

FREE ROUTE SURVEY SERVICE — What's more, Sinclair's Route Survey Service provides an individual analysis on any Trucker's routing problem. It shows the most practical, direct routes with modern truck stops. For complete information fill out and mail the coupon. No obligation.

Dino the Sinclair Dinosaur
says:
"MAIL THIS COUPON."



SINCLAIR REFINING COMPANY

Truck and Bus Sales Division • 600 Fifth Avenue, New York 20, N.Y.

At no obligation, send me:

- ☐ Booklet Listing Truck Stops
☐ Information on Sinclair's Route Survey Service

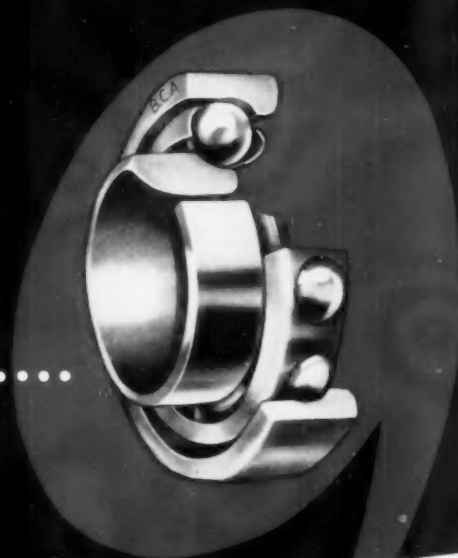
NAME _____
 COMPANY _____
 POSITION _____
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made for the job.....

- saves time in the shop
- saves trouble on the road

Get the bearing that's exactly right for the job... for your wheel, generator, transmission, clutch and differential bearing installations. BCA has specialized for over 50 years in ball bearings for automotive applications. BCA ball bearings are widely used as original equipment, generally preferred for replacement use in cars, trucks, buses, agricultural and off-the-highway equipment.

BCA ball bearings assure ease of installation, smoother performance, longer life, less down time in the shop, lower cost per mile. Specify BCA ball bearings. They're immediately available from leading bearing distributors.



**ball
bearings**

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-POWER BEARINGS, INC.



Tru-Stop Brakes

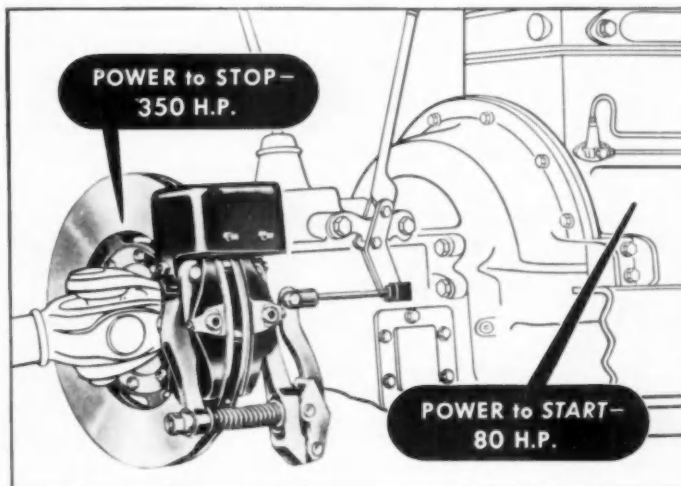
Meet Every Heavy-Duty Safety Requirement

OFFER POSITIVE PROTECTION
AGAINST RUNAWAY OR PARKING
ACCIDENTS—AT LOWEST COST

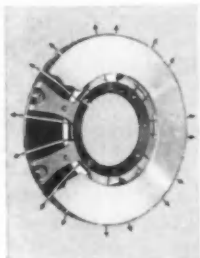
HERE IS WHY:

**They have surplus power
required for emergency
service—no dangerous
self-energizing**

TRU-STOP Heavy-Duty Emergency Brakes are not only excellent parking brakes. They serve as a complete, independent and fully reliable braking system. Operating on the propeller shaft they enable the driver to continue on safely in the event of service brake failure. TRU-STOP brakes have the surplus braking capacity to be used repeatedly as an auxiliary to service brakes.

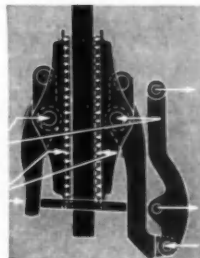


Brakes actually do more work than the engine in terms of horsepower. Where it takes 80 HP to accelerate to 20 miles per hour, it takes 350 HP to make a safe stop from 20 miles per hour within required limits.



Ventilated to throw off heat

Brake efficiency depends on ability to throw off intense heat—rapidly. Discs of TRU-STOP brakes are exposed to the air even during the braking operation. Ventilated design circulates air between the disc plates.



Give uniform brake pressure

Disc of TRU-STOP brakes is "squeezed" between the flat surface of the shoes. Effort applied to brake lever operates front and rear lever arms simultaneously. Pressure is exerted on the center of each shoe. Entire lining surface is in contact.

FOR SAFE, ECONOMICAL, HEAVY-DUTY BRAKING WITH MAXIMUM LIFE AND MINIMUM MAINTENANCE

TRU-STOP Brakes are used on a great variety of mobile and stationary equipment

SUCH AS—

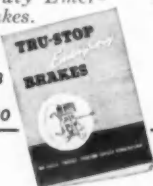
Motor cranes
Road rollers
Dump trucks
Power dividers
Cooling tower fans
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Cold header presses
Scrubbing machines
Wire rope stranders
Fork lift trucks
Motor scrapers

Tractors
Graders
Diamond core drills
Electric locomotives
Oil well servicing rigs
Railway inspection cars
Shapers
Power take-offs
Winches
Motor shovels

Tractor loaders
Conveyors
Hard rock drill positioners
Mine locomotives
Power presses
Railway power ballisters
Cable tool spudders
Aerial tram cars
Tension wire stringers

We will be glad to answer any questions or give you more detailed information about TRU-STOP Heavy Duty Emergency Brakes.

Send for
Catalogs
DH-33
and
DH-530



Automotive and Aircraft Division AMERICAN CHAIN & CABLE

601 Stephenson Building, Detroit 2
2216 S. Garfield Street, Los Angeles 22 • Bridgeport 2, Conn.



Piggy-Back Reefer

Continued from Page 108

On hauls of less than 175 miles, he explains, Armour is usually able to ship its meat in straight trucks capable of making city deliveries. Transportation costs per cwt are no higher than when 32-ft highway trailers are used, and

often lower. Therefore, the two major benefits of piggy-back obtained by Armour—elimination of rehandling and a reduction in existing shipping costs—produce at most only nominal savings on these short runs.


On trips of more than 500 miles, a tractor-trailer combination moving over the highway can usually reach the distribution

point several hours ahead of the trailer-loaded flatcar. For Armour, this time-saving is important. The customer, who is waiting for delivery, could switch to another supplier if the in-transit time of his shipment is increased. True, Armour's Fort Worth-Harlingen cargoes do not arrive until the second morning, but Harlingen retailers were not getting first-morning delivery even when trucks were used.

With four piggy-back runs in operation, Armour is still searching for areas where additional trips can be set up. This is an indication that the idea, despite its limitations, offers substantial benefits that can be obtained under a wide variety of shipping conditions.

END

Please Resume Reading Page 76



**HIGHWAY
ACCIDENT**

COSTS

- Damaged cargo
- Delayed shipment results in ill will
- Equipment tied up
- Disrupted schedules
- Litigation
- Loss of insurance rating
- Direct repairs

**CAN YOU AFFORD
TO BE WITHOUT
GOVERNOR
ACCIDENT
CONTROL?**



**When HANDY GOVERNORS
COST SO LITTLE**



KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN

At Nashville Transit

Continued from Page 73

them \$8 or \$9 monthly on commercial parking lots near the car barns. These were rough, dusty or muddy according to the weather, and badly crowded.

Nashville Transit Authority owns the new parking lot adjacent to the bus facility. The Authority is to pave the lot and lease it to us. We maintain it, line out the slots, mark each with the name of the man to whom it is assigned. We've arranged with the union to charge each man \$3 monthly to cover costs. Charges are regular payroll deductions.

So—Nashville Transit now has one of the most modern bus facilities in the country. Ironically, we have also come full cycle in one way. We are now back in the original spot where the old mule-car barns used to be. But times have changed!

END

Please Resume Reading Page 74

there's only

one **RED BLOCK**

...and that's

WORLD BESTOS **Red Block Combination**

the only heavy duty Brake Block combination
with a **NO-FADE GUARANTEE**
(heat or water)

For more than 10 years the name RED BLOCK has designated a *premium grade brake block formula* . . . developed exclusively by WORLD BESTOS for heavy duty trucks and trailers in severe service. The special RED BLOCK formula is used *only in combination* with World Bestos "D" Blocks to deliver superior safety . . . and all 'round braking performance unequaled by any other blocks in similar service. The superiority of the RED BLOCK Combination has been proved by 10 years of constant use by America's biggest and finest heavy duty fleets. Throughout the trucking industry, RED BLOCK is recognized as the *short name* for *World Bestos RED BLOCK COMBINATION* . . . the only combination with a NO-FADE GUARANTEE . . . the only combination that substantially *reduces drum wear* . . . and consistently delivers *more mileage* between relines.



For complete information about World Bestos RED BLOCK Combination, call your World Bestos Distributor or write direct to



WORLD BESTOS NEW CASTLE, INDIANA

Takes a beating without chipping...



"PAINT PILE DRIVER." As a Du Pont chemist trips the trigger, a weighted hammer comes crashing down on a panel painted with "Dulux" Enamel. The metal is repeatedly dented, but "Dulux" does not chip. That's why "Dulux" stands up so well under slam-bang loading and flying gravel on leading fleets.

no wonder Du Pont DULUX Enamel is specified for leading fleets

To build a reputation for durability on trucks and buses, a finish must graduate at the head of its class from the school of hard knocks. And look at the hard knocks "Dulux" Enamel takes for a final exam! When that "paint pile driver" in the photo at left pounds dent after dent into the panel without chipping the "Dulux" Enamel finish, the lab knows its ready for anything on the road.

OTHER PUNISHING TESTS insure excellent "Dulux" resistance to fog, dew, rain, salt air, ice, blazing sunshine and constant vibration. As a result, "Dulux" has become the *standard* of durability in the toughest commercial service—on delivery and transport trucks as well as on local and long-distance buses.

REAL ECONOMY—When you put Du Pont "Dulux" on your fleet, you take advantage of the continuing experience of the world's greatest paint laboratory. You get tested performance for easy working *in* the paint shop . . . long, trouble-free life *out* of the paint shop. That's economy in the truest sense of the word.

And when you see how "Dulux" Enamel snaps back, rich and lustrous, at every washdown, you'll know you picked a winner to carry your company colors. For lasting good appearance that earns lasting good will, specify Du Pont "Dulux" Enamel.

IT PAYS TO USE THE COMPLETE "DULUX" SYSTEM



Du Pont "Dulux" Enamel



REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

COMMERCIAL CAR JOURNAL, December, 1957



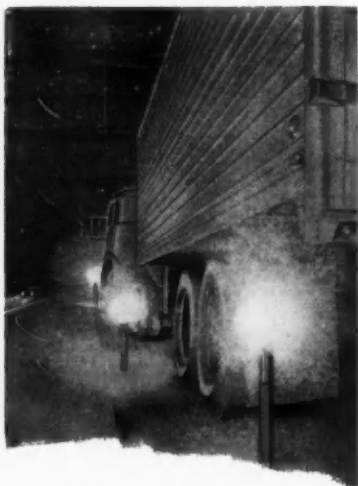
CARNATION MILK TRUCKS say "dairy-fresh" at a glance, with their super-tough finish of "Dulux" Enamel. Carnation has used "Dulux" for over 15 years, finds it pays off in more road time, less day-to-day maintenance cost.



GREEN BUS LINES, INC., in New York, reports, "Dulux" has proven to be the most economical finish because of its toughness, durability and color retention." They also note that it reduces costs and time in the paint shop.



GRIESEDIECK BEER TRUCKS do a good job of advertising traditionally fine GB quality, with "Dulux" Enamel keeping the big "rolling billboards" bright through 10-state deliveries in temperature extremes, industrial fumes and traffic.



**Quicker Starting,
Better Performing**

KILGORE

Flares

Provide

**SAFETY, LIGHT, CONVENIENCE
for Highway
Night-Time Emergencies**

A pitch-black night . . . a heavily-traveled highway . . . a stalled, unlighted truck . . . a rapidly approaching car . . . all stage props for a serious, costly accident. But, with Kilgore Flares placed ahead, alongside and behind the truck, the oncoming motorist is aware of lurking danger.

Kilgore Automotive and Truck Flares perform in all kinds of weather. Faster starting . . . candle power substantially exceeds minimum requirements . . . convenient, sturdy wire stand or spike . . . plastic plug for greater rigidity. Equip your fleet with Kilgore Automotive and Truck Flares. See your Kilgore dealer.

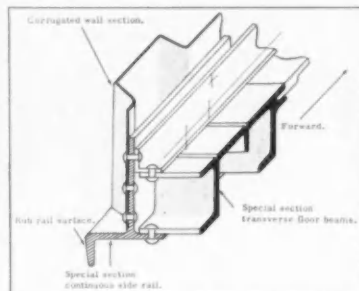
Kilgore, INC.

INTERNATIONAL FLARE SIGNAL DIVISION
WESTERVILLE 2, OHIO

Aerobilt Trailers

Continued from Page 91

door thickness of only one inch. Standard dimensions include 12-ft. 6-in. overall outside height unloaded, 98 $\frac{3}{4}$ -in. inside height,



35-ft overall length (variable in 8 $\frac{1}{2}$ -in. increments), 96-in. outside width, 92 $\frac{3}{4}$ -in. inside width, 36-in. kingpin position measured from front edge (variable in 4.3-in. increments), 93-in. high and 91 $\frac{1}{4}$ -in. wide clear door opening.

END

Please Resume Reading Page 94

Two-Piece Valves . . .

Continued from Page 88

Some fleet operators have been able to reduce their spare tire inventory from a ratio of one spare to two trucks to as low as one to 20.

For tubeless tires, the spud is clamped into a round hole in the bottom of the well of the drop center rim instead of having a rubber base for vulcanization.

For tubeless tires used with a tube where a problem is encountered in mounting, the two-piece valve can also be a help. Since the valve hole is located in the side of the well in the rim, it takes skill to get the unit assembled without damaging the valve. Should the valve be damaged it is simply removed from the spud and a new valve screwed in.

END

Please Resume Reading Page 90



**J-M
sealing
compounds**

*Seal
joints quickly, easily
and permanently*



Johns-Manville Body Sealers are permanently plastic synthetic resin compounds developed for sealing bolt fastened joints against the passage of air, dust, and moisture. They are *highly adhesive, will not skin or harden, will not corrode metals and other surfaces, and can be painted after application.* Stable under a wide temperature range, they have excellent aging characteristics.

Available in these two types:

J-M Type A Body Sealer, of relatively soft, knife-grade consistency. Supplied in 1 $\frac{1}{2}$ " and 3" dia. pugs, extruded beads (min. diameter $\frac{1}{4}$ ") and ribbons (min. thickness $\frac{1}{8}$ "). Recommended for use in bulk form, this body sealer can be readily extruded on the job.

J-M Type B Body Sealer, of heavier, knife-grade consistency. Supplied in 1 $\frac{1}{2}$ " and 3" dia. pugs, in beads ($\frac{1}{8}$ " dia. up), and ribbons ($\frac{1}{16}$ " up). Supplied packed in flat strips or multiple and single strand reels.

Johns-Manville Body Sealers are supplied in a variety of packages for time saving application. For Sheet EL-67A and Chart EL-72A write Johns-Manville, Box 60, New York 16, N. Y. In Canada, Port Credit, Ontario.

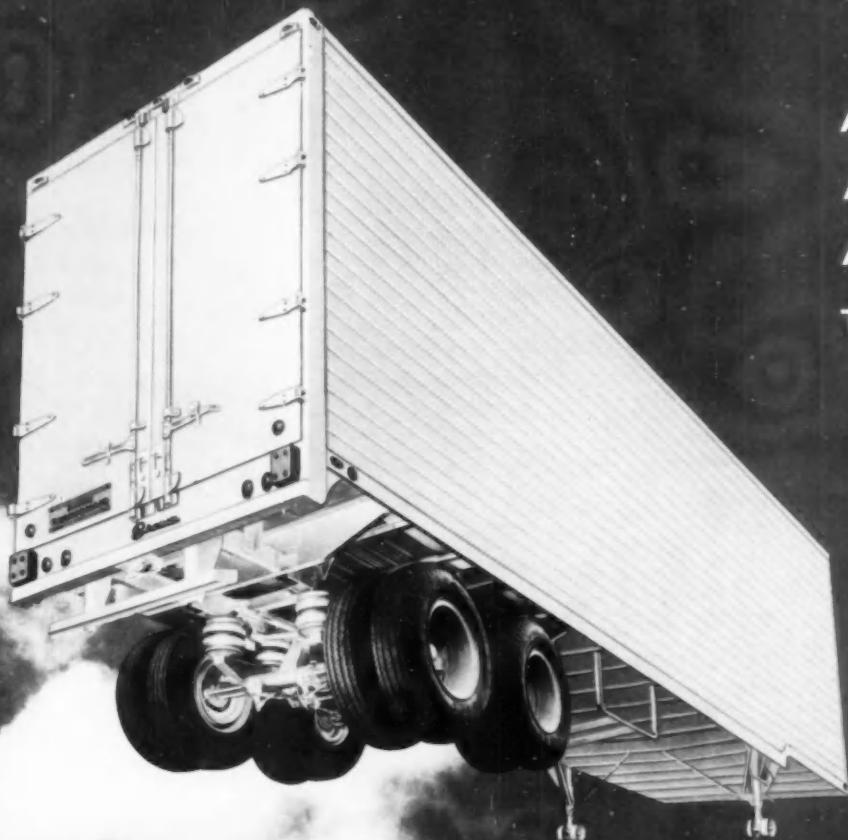


**Johns-Manville
SEALING COMPOUNDS**



New Floating Ride

AVAILABLE ON
ALL BROWN
ALUMINUM
TRAILERS



with
BROWN

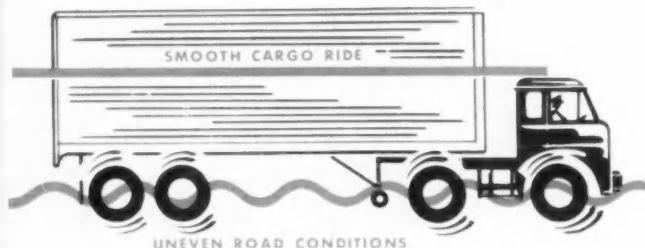
CushionAir
S U S P E N S I O N

BROWN
MODEL
204

Cushionair

SUSPENSION

all AVAILABLE ON BROWN ALUMINUM TRAILERS



Cushionair GIVES THE CARGO A FLOATING RIDE

The shock of every bump is smothered in cushions of air, as Brown "Cushionair" Suspension smoothes out roughest roads automatically. Cargo and trailer are literally air-borne. Only the wheels know where the bumps are, and they have freedom of action to skim lightly over any road—with any type of load.

SLASHES 500 POUNDS OFF TRAILER WEIGHT

"Cushionair's" amazing light weight lets you haul approximately 500 pounds more freight within legal weight limits, than with steel spring suspension. Brown "Cushionair" Suspension gives you a constantly low, level floor, whether empty or loaded, and allows greater inside loading height. The light weight of the suspension and the greater capacity of the trailer allow you to put more weight in the freight—more profit in every trip.

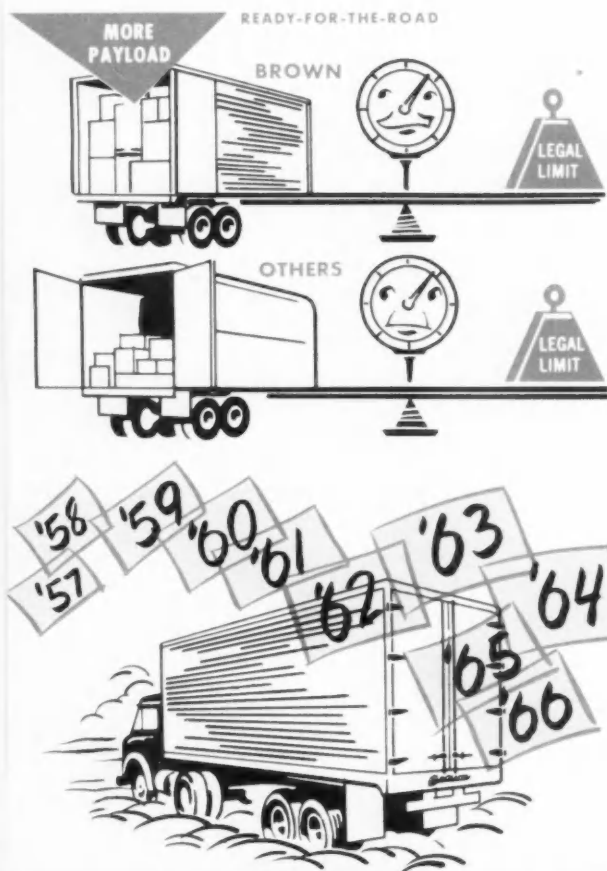
LENGTHENS TRAILER LIFE REDUCES MAINTENANCE

An entirely new concept in a soft, smooth ride, "Cushionair" Suspension ends stresses, strains, and jolts that shorten equipment life. Cushioned by air and supported by rubber bushings, "Cushionair" eliminates spring breakage with costly "down time", and ends the need for lubrication.

Write for complete information

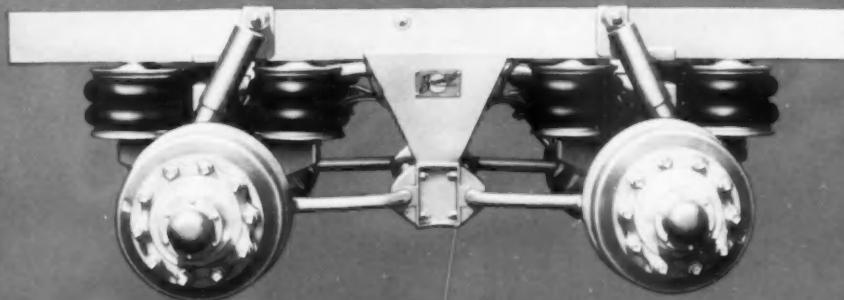
Learn about Brown's sensational "Lightweight" aluminum trailer that "rides on air" . . . and weighs as little as 7,500 pounds for the 40 foot model equipped and ready for the road.

Ask for Folder BT-204 . . . Brown Trailers, Inc., Dept. AD-127, PO Box 54, Spokane, Wash.



...the last word in performance

BROWN ENGINEERED AND QUALITY BUILT



GIVES YOU TOMORROW'S CARGO RIDE...TODAY!

Saf

plenty driving is caused by ways of thinking on the home, ing to

Gast follow with e eral th percen

A d proxim

B dr approx

C d habits

D d have trained

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COMME

Safety Program Cuts Accidents

Continued from Page 79

plenty of obvious errors in many driving practices. When the driver is caught in the very act—and ways of eliminating or anticipating these problems are discussed on the spot—the lesson is brought home, effectively and without having to resort to theory.

Gast divides his drivers into the following categories after riding with each one; finds that in general they fall into the following percentages.

A drivers, excellent rating, approximately 35 per cent.

B drivers, can stand restraining, approximately 50 per cent.

C drivers, need to develop new habits, approximately 25 per cent.

D drivers, unsatisfactory (they have been eliminated or retrained).

Thus, the test is rigid. Even the Excellent class gets attention from time to time, as no one ever knows just whom Gast will pick to ride with. Concentration, of course, is made on the middle range group, and reclassification is made from time to time. Gast feels, however, that no group is to be considered "graduated" as old habits need a re-examination and newly developed bad traffic practices must be pointed out continuously.

After a run

with a driver, the safety director reviews the principles outlined in the training program. While every driver is supposed to read the material on his own, it is the philosophy of the system to make the instruction personal. And after every training period, the driver is exposed again to road problems he must negotiate. Here are some of the items that would be covered in such a meeting . . .

- Nearly all traffic accidents result from a few common errors in seeing that all drivers make to some degree. What counts is how often we make the errors.

- With good seeing habits a driver can go five to 10 years without once needing a tire-squeal

stop to escape an accident. He will have almost no chance of either causing an accident or being trapped by errors of other drivers or pedestrians.

- Every driver thinks he sees correctly in traffic. When he makes

errors in seeing he is never aware of the fact at the moment. So he is apt to blame his near-misses or accidents on bad luck or the errors of other people.

- We have five distractions to deal with in driving. When a driver makes a wrong move in traffic, the reason usually is that his seeing habits were so weak that he let one or more of the five

(TURN TO PAGE 122, PLEASE)



use only
**FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!**



You can be proud of every repair job when you use only genuine parts. When it comes to servicing Bendix* Drives, be sure to use only *factory new* Bendix Drives and Parts. This means your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF.

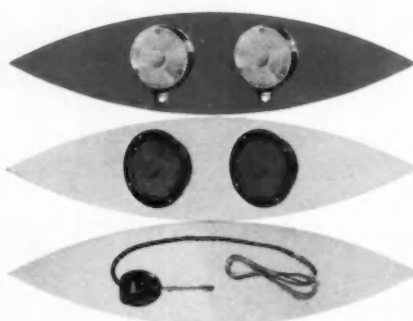
Bendix Drive

ECLIPSE MACHINE DIVISION of **Bendix**
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 285 East 42nd St., New York 17, New York



Guide's High Visibility Reflectors and Turn Signals mean all-weather safety for your truck fleet !



Turn signal set has four lamps, self-cancelling switch...choice of bracket or flush mounting for rear lamps

Most often, trucks can't stop for bad weather. They must be on the road in rain, snow and sleet. It is in such weather, when visibility is low, that the danger of rear-end collisions rises sharply. And there's not much that even your best driver can do to avoid this hazard, if his truck is not clearly visible from the rear. Guide's high-visibility reflectors and turn signals can help prevent needless and costly delays. Because of their dependability and uniformly high quality, Guide reflectors and signals are specified as standard equipment by many leading vehicle manufacturers. Available at United Motors Service outlets and most truck dealers.



Guide Lamp ... BRIGHTEST NAME IN LIGHTS

1928-1958
 FORWARD FROM FIFTY

GUIDE LAMP DIVISION • GENERAL MOTORS CORPORATION • ANDERSON, INDIANA

"We've covers trailer these with a This m neopre cargo "Th are eas do the

COA

COMM



“82% reduction in tarp repair costs after we switched to coated nylon”

—says Warren A. Taussig, Vice President of Burlington Truck Lines, Inc.

“We’ve averaged savings of 82% on repairs since we put covers of neoprene-coated nylon on our 50 open-top trailers. Besides having greater resistance to damage, these long-wearing covers can be mended in the shop with a repair kit which requires no special skill to use. This means a lot less downtime. The waterproofness of neoprene-coated nylon has eliminated costly damaged cargo claims . . . another big saving.

“The men like these lightweight covers because they are easy to handle in any kind of weather. One man can do the covering job that used to require three.”

Find out how coated nylon tarps can cut your operating costs. Ask your fabricator or supplier for information, or drop a line to: E. I. du Pont de Nemours & Co. (Inc.), 5518 Nemours Bldg., Wilmington 98, Delaware.



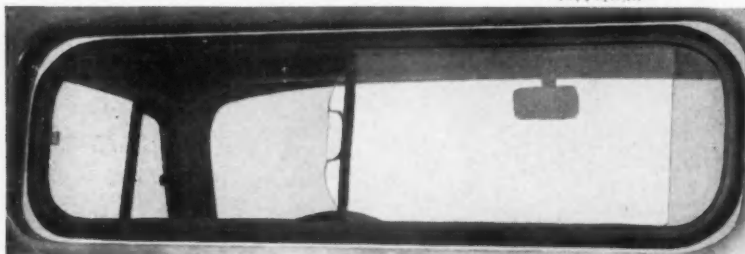
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

**COATED NYLON FOR TARPS—LONG-WEARING . . . LIGHTWEIGHT . . . EASY TO HANDLE
. . . WATERPROOF . . . RESISTANT TO ROT AND MILDEW**

BARBER'S

DELUXE SLIDING REAR WINDOWS *for*
All Trucks

GETS THE JOB DONE!



Pat. Nos. 2,770,487-2,805,097 Other Pat. Pend.



Chevrolet & GMC



Ford

AVAILABLE IMMEDIATELY

- 1947-57 Auto Car
- 1947-57 Chevrolet
- 1948-57 Dodge
- 1954-57 Diamond "Ts"
- 1948-57 Ford
- 1947-57 GMC
- 1954-57 Internationals
- 1950-57 Macks B & D Models
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- 1941-57 Studebaker
- 1952-57 White (3000 Series)

Barber's DeLuxE S-L-I-D-I-N-G Rear Truck Windows *answer* the many problems . . . Give Drivers full-view rear work opening to operate winch controls, straighten cables, *true air conditioning without refrigeration* and hear instructions . . . Gives Management a Faster and Safer Job.

- Installs in just 20-minutes!
- Fits original rear cab opening!
- All units contain Safety Glass!
- Completely Weather Proof!
- Locks When Closed!

When ordering please include make, model and year (may be assorted models for quantity price). Installation instructions with each unit. Overnight delivery to many areas.

Also Units Available for Crew (Cabs) Shelters, Sleepers, Flat Backs, Station Wagon, Sedan Delivery, Panel Trucks and Units Made to Order.



BARBER'S GLASS & MANUFACTURING CO.

1315 HARRISON, BOX 588, Phone FOrest 5-4358, OKLAHOMA CITY, OKLA

Safety Program . . .

Continued from Page 119

distractions trap him into not seeing a traffic conflict.

• We also have five "seeing jobs" to carry out in driving. When a driver gets trapped by the wrong move of someone else, the reason in nearly every case is that the "innocent" driver had such faulty seeing habits that he was not carrying out all five seeing jobs.

Let's review the five distractions that cause drivers with faulty seeing habits to make wrong moves in traffic:

Route problems. Each driver starts his trip from a different point along the road and has his own destination in mind. More than half of all traffic mishaps occur when drivers get so intent on a route problem—on turning at a particular corner, entering or leaving a parking place, or looking for a road sign or street address—that they fail to see they are crowding or blocking in traffic.

Mental disturbances. We look with our eyes but we see with our mind. Unless our normal seeing habits in traffic are good, we cannot avoid errors in seeing when hurrying, worrying, or irritated at another driver—or when bored, tired, not feeling well, or lost in personal thoughts. Every driver has a "hurry habit" to some extent and wants to find a way around anything that delays him in traffic. This fact alone explains many driving errors.

Scenery. This covers anything along the road that arouses our curiosity and holds our eyes too long—such as staring at an accident scene, watching a fire engine speed down the road, or "window shopping" while driving past some stores. At night, many drivers fix their eyes too long on any kind of roadside light. Young drivers often stare too much at a new-model car they see on the road.

In-the-vehicle. A driver with weak seeing habits will stare at a bee that got in the car—or pick the wrong time to light a cigarette, plug in the car radio, or stare at

(TURN TO PAGE 124, PLEASE)

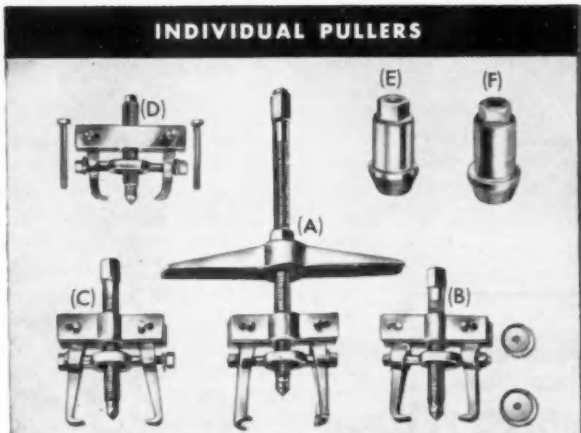
\$37.50

LIST

F.O.B. Oklahoma City
Subject to change
without notice.

Get six pullers in one interchangeable set

INDIVIDUAL PULLERS



(A) 1 CJ-86	Pinion Gear Puller	\$22.85
(B) 1 CJ-81C	Side Carrier Bearing Puller	13.75
(C) 1 CJ-82B	Pitman Arm Puller	11.95
(D) 1 CJ-87	Timing Gear Puller	12.50
(E) 1 CJ-66-16A	Oil Seal Puller	6.15
(F) 1 CJ-66-24	Oil Seal Puller	7.50
(G) 1 KR-280C	Metal Case	8.25

TOTAL \$82.95

—SAVE OVER
1/3 THE COST

INTERCHANGEABLE PULLER SET



\$57.50 1 CJ-281-B
Set in
Metal Box

YOU SAVE \$25.45

on easy payments
\$6.50 down
\$2.25 per week

Prices subject to change without notice.

Now you can get a single *Snap-on* combination puller set that handles the work of six individual pullers — for a third less cost.

Save now on the set that handles almost all of those special, frequent pulling jobs — a set that pays for itself over and over again.

Snap-on pullers stand out and stand up

These *Snap-on* pullers are made from the finest alloy steels. Jaws are forged and heat-treated for extra strength and are shaped to match the parts they pull. All parts are precision-made to fit together smoothly, work easily and speed your pulling jobs.

Yours on easy payments

Take advantage of this six-in-one offer now. Equivalent separate pullers, regardless of make, would cost you much more. And this set is yours for just a little down, a little each week. Ask your *Snap-on* man about the CJ-281 puller set the next time he calls.

TRADEMARK OF
SNAP-ON TOOLS
CORPORATION

8026-L 28th Avenue

Kenosha, Wisconsin



Safety Program . . .

Continued from Page 122

the gasoline gage to see if he needs gas. Some drivers turn their heads too much to talk with passengers, or get distracted by children quarreling in the back seat. Driving an unfamiliar vehicle also can bring distraction.

Unpracticed driving tasks. Any

time you drive well above your normal top speed, your normal seeing habits can trap you. City and rural driving, day and night driving, expressway and icy-road driving, all require practice. Few drivers ever practice correct seeing in backing up, so one in four daytime accidents involve a backing vehicle. Driving in another state, where road signs and driving customs may be somewhat different, also can cause distractions.

But while one or more of the five distractions usually is present when a driver makes a wrong move in traffic, these distractions are not the real causes of accidents. A driver with correct seeing habits does not allow these distractions to trap him.

An often-overlooked

fact about accidents is this: They usually occur when conditions are the most favorable for safe driving. Most accidents happen in clear, dry weather, on straight roads, and when traffic is light or moderate in volume. Most accidents also happen to sober, well-intentioned drivers, who have been driving for some years, and who have good past driving records.

A tiny group of reckless or incompetent drivers does have more than an average share of accidents—but this group accounts for only a small share of total accidents. The reason why accidents usually happen when conditions are most favorable for safe driving is that this is when drivers get their minds on something else and drive by habit alone.

When driving by habit

alone, most drivers "see" only three things in traffic. They watch (a) the left edge of their traffic lane a short distance ahead, (b) objects near the right edge of their lane and (c) the oncoming vehicle or the one they are following.

All three of these seeing habits are deadly in driving.

The whole trick

in accident-free driving is to carry out five simple seeing steps that let you "read" the traffic picture in one fast glance and make correct decisions with no need for thinking.

END

Please Resume Reading Page 80



A Great Deal Hinges on the Right Hardware!

SQUARE CORNER HINGES

made by HANSEN are fastened to side of body. They permit door to swing wide open, flush with side of body. They provide loading space the full width of body. Made of strong, durable, three-ply all-steel, with hardened steel thrust bearings. Three lengths—12", 16", and 19".

No. 12A—width of leaf 2 1/4", height of butt 5", width of butt 3 3/4" from hinge pin.

No. 16A and No. 19A—width of leaf 2 3/4", height of butt 5 1/2", width of butt 4 1/2" from hinge pin.

HEAVY DUTY LOCK

No. 111 LOCK. Heavy duty. No rights or lefts. Rod 48" top, 34" bottom, for doors up to 7'. For 8' doors, two 48" rods supplied. Bolts, top and bottom, 1 1/2" wide, with 1 1/2" travel. Center bolt, 2 1/2" wide. Rods, 1/2" dia. Available with 3 different types of Handles: 111A—Padlock Handle, 111B—Flush Type Padlock Handle and 111C with Locking Cylinder.

REAR DOOR AND SIDE DOOR LOCKS

are available from the HANSEN line for all types of doors—large or small, single or double. Included are rotary door, rotary and take-up; slamming, slam-and-take-up; heavy-duty; refrigerator. HANSEN also makes other types of locks for many and varied applications in body construction. Catalog with complete details on request.

FOR COMMERCIAL BODY AND INDUSTRIAL USE

HANSEN is noted for its ruggedness, strength, durability and trouble-free operation. Its use is not confined to commercial bodies, tanks, trailers, etc., but includes industrial uses on doors of power concrete mixers, power shovels, substation cabinets, locomotives, etc.

NEW ONE-UNIT LOCKS

New in the HANSEN line are the No. 101, 102 and 103 One-Unit Locks. Flush Handle and Rods are integrated. Lock comes complete, ready and easy to install. Other new Locks and Handles have been recently added and are now available. Ask for descriptive folder.



The Hardware for Hard Wear

H1257

A. L. HANSEN MFG. CO.

5047 RAVENSWOOD AVE.

CHICAGO 40, ILL.



"The light's changed!"



Mr. Edward Gutschmidt
Fleet Superintendent

In fleet service . . .

"We just don't have bearing trouble"

The Bend-Portland Truck Service covers central and southeast Oregon. Established in 1927 this progressive company has continued to grow because of an area-wide reputation for service and efficiency.

Recently Mr. Dale Huff of The Cleveland

Graphite Bronze Co. interviewed Mr. Edward Gutschmidt, fleet superintendent, as to freight services and engine bearing performance. We believe you will find highlights of this discussion and the performance record of Clevite 77* bearings informative and impressive.

Q Mr. Gutschmidt, what is the major portion of your business?

A Primarily we deal in auto freight and typical scheduled carrier services.

Q How about equipment? What do you have?

A Let's see, 19 road rigs and 54 city trucks. If you include trailers and company cars it totals around 125.

Q With regard to make, do they vary?

A Yes, our fleet includes eight different makes.

Q What would you consider the length of an average haul?

A Well, our longest haul is about 500 miles and the shortest 120. Our average, however, would be about 200 miles.

Q How are driving conditions over your routes?

A They really vary. We travel from sea level to 4000 feet and run into every conceivable condition. Temperatures go down to 30 below in winter and as high as 110 during the summer.

Q What about annual mileage?

A Each road rig averages about 100,000 every year. The city fleet about 8,000.

Q I assume you handle your own maintenance?

A That's right, we have a fully equipped maintenance shop.

Q When it comes to engine bearings do you have a preference?

A Yes, our number one choice is Clevite 77. We've been using them for about 10 years.

Q Why Clevite?

A Mainly because we have yet to find a better bearing. We have run main bearings 400,000 miles and rod bearings up to 225,000.

Q Going back for a moment, why did you start using Monmouth Clevite 77 bearings?

A Because they are equal in quality and material with original equipment.

Q Do you have an established bearing maintenance program?

A Truthfully, we never worry about bearings until there is some other work to do on the engine. We just don't have bearing trouble.

Day after day fleet operators everywhere learn that Clevite 77* is the finest high-duty engine bearing obtainable. Its patented tri-metal construction provides greater fatigue strength, corrosion resistance and a superior running surface.

To improve engine performance . . . to cut "down time" . . . to reduce maintenance costs . . . contact the nearest N.A.P.A. jobber for Monmouth bearings.

*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation



Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

The Cleveland Graphite Bronze Co.
Division of Clevite Corporation
Cleveland 3, Ohio, U.S.A.

Kwik-Way

Cylinder Boring Machines

pay for themselves

IN

bigger profits

Let us demonstrate

Let us prove conclusively in your shop on an actual job how much faster you can do the job with Kwik-Way. You'll see how much easier it is to achieve accuracy that maintains your high standards of workmanship. And we'll show you the features that make Kwik-Way Cylinder Boring Machines superior: features like overhead chip removal, screw feed with automatic retraction, quick, positive non-distorting anchoring. Built rugged for fast, easy sleeving. No need to work "blind."

For a demonstration
with absolutely no obligation,
mail the coupon in this
advertisement, today.

MAIL THIS
COUPON
TODAY

Cedar Rapids Engineering Company
912 17th St. N.E., Cedar Rapids, Iowa

- ☐ Please arrange to come in and demonstrate without obligation, Kwik-Way Cylinder Boring machines.
- ☐ Send me literature and prices.

Name _____

Firm Name _____

Address _____

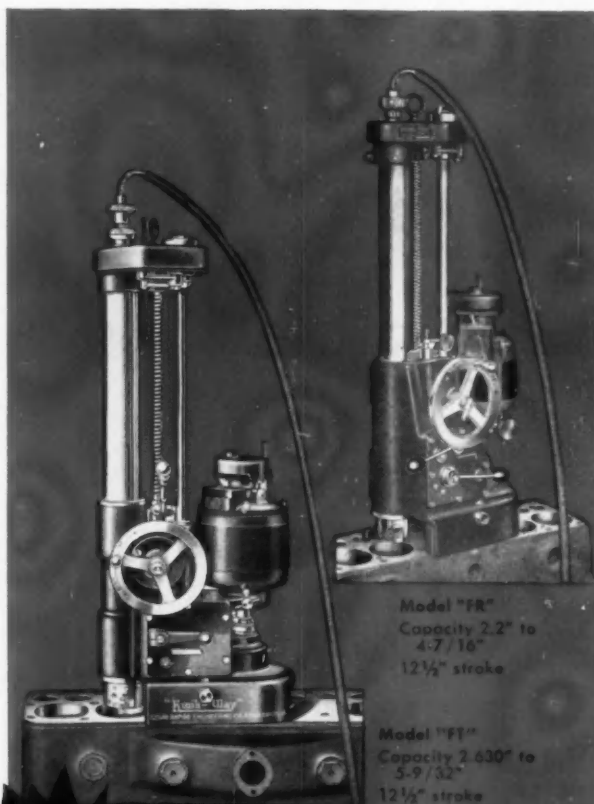
City _____ State _____

Precision • Speed • Long Life

get all 3 in

Kwik-Way

ENGINE RECONDITIONING EQUIPMENT



Model "FR"
Capacity 2.2" to
4.7/16"
12 1/2" stroke

Model "FT"
Capacity 2.630" to
5.9/32"
12 1/2" stroke



ZENITH
CARBURETORS

ALL THAT THE NAME IMPLIES—
AT THE TOP—IN DESIGN AND IN DEPENDABILITY

We wish that we could guarantee you trouble-free carburetion under all operating conditions. We can, however, definitely assure you of the next best thing. With Zenith* Carburetors, your service requirements are fewer, carburetor life is longer and you will get far more reliable fuel control.

It will pay you to look for Zenith Carburetors

on the new vehicles you buy. And when you overhaul, remember your local Zenith distributor can help a lot in supplying the right carburetor for every type of engine, no matter what size horsepower or design. **It is a fact—Zenith actually has more experience in more fields with more engine types than any other manufacturer.**

*REG. U. S. PAT. OFF.

Zenith Carburetor Division

696 HART AVE., DETROIT 14, MICH.

Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.



Selection System Finds Employees

Continued from Page 80

Station managers are expected to handle the interviews themselves, filling in the answers to the pattern-interview questions and noting the applicant's reactions to the questions. Managers are helped in their observations by a set of questions

printed in red under the questions they ask the applicant.

For example, when the applicant is asked: "What did you like about the last job?", the manager is instructed to note whether the applicant had been happy and contented

in his work. The applicant is then asked: "What did you like least?" From his answer the manager should determine whether his dislikes were justified.

A driving test

report takes up the rest of the inside pages. This is filled out by the station manager or whoever conducts the test, and includes observations made during a 30-minute drive over a course similar to the terrain on which the applicant will be expected to drive. The applicant is rated on 10 points—attentiveness, nervousness or hesitancy, overconfidence, use of rear view mirrors, use of hand signals, manner of making turns, smoothness of driving, observation of warning signs, variation of speed to fit conditions.

Each point is rated in one of four degrees: (1) not at all, (2) occasionally, (3) part of the time, (4) often. With four degrees of performance to choose from, the supervisor is forced to truly evaluate, instead of just marking most points as "average." Similarly, he has to rate the applicant overall as being outstanding, good, average or poor.

The back page on

the application blank starts with the form for a telephone check, to be made with the most recent employer. The hiring manual suggests that checks be made with at least two previous employers. This is to balance out any personal feelings that may have existed between the applicant and a previous supervisor. Such feelings could be too favorable as well as unfavorable.

Only eight questions are listed on the phone check form, after establishing for the record the identity of the person contacted. These questions confirm or refute the applicant's claims to length of service, type of work performed, and reason for leaving. They find out if he was accident prone. Finally, the key point is asked: "Was his relationship such that the company would be willing to re-hire the applicant, and if not, why not."

Besides verifying the

applicant's statements the interviewer is often able to decide what

(TURN TO PAGE 130, PLEASE)



Engineered & Built to Take the High Compression Gaff!



*"Original Engine
Engineered"*

VALVES



**RMC "SERRATED"
VALVE SPRING
INSERTS**

A must for every valve grind job, compensates for torsion relax and restores Spring tension. Recommended by Car and Truck manufacturers.

Today's Shorter Strokes, larger bores, and higher compressions are rough on valves—tend to shorten valve life.

rmc, two piece valves featuring Austenitic steel heads, stellite faces, and heat treated stems, where required, are engineered and built to stand the gaff—giving better performance and greater mileage.

Specify *rmc* Parts



Valve guides and seats



Valve Springs and locks

Sold by leading Automotive Parts Jobbers
WAREHOUSED IN ALL PRINCIPAL CITIES

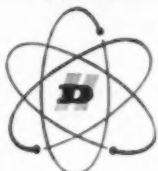
RICH MANUFACTURING

BATTLE CREEK
MICH., U.S.A.

BASIC VALVE MANUFACTURER
FOR ORIGINAL EQUIPMENT
SINCE 1908

DUNLOP...THE TIRES WITH

BUILT-IN BALANCE



...thanks to ATOMIC ENERGY

Through **AccuRay®**, an atomic-powered measuring device, Dunlop tires have a NEW "built-in balance"...and an inner toughness to resist road abuse...give extra mileage, higher recap recovery, lower costs per mile.

By precise control of the exact amount and thickness of protective rubber applied to every cord ply, AccuRay eliminates uneven wear due to out-of-round tires...adds new stability and greater driving control. Now...Dunlop truck tires are more perfectly balanced to run cooler, last longer.

Try better-balanced sets of Dunlops on your trucks...watch tire costs drop. Available in Nylon or Super Hi-Test Rayon...tubeless or tubed...for on-or-off-the-highway service.



Dunlop's AccuRay Process—Electrons, emitted from an Atomic Isotope, scan sheets of coated tire cord, controlling uniform application of select insulating rubber within precise tolerances of $\pm .001$ inch.

**You'll go farther...SAFER
on tires by**

DUNLOP

...They're AccuRated

DUNLOP TIRE AND RUBBER CORPORATION, BUFFALO 5, NEW YORK





smallest pistol grip power wrench... *on the market!*



• Handy, built-in air regulator lets you select the power you want for any job. Calibrated so operator can adjust power where necessary.

New SIZE 402 / 3/8" DRIVE
SELECT-AIR
ROTARY IMPACT TOOL

Developed especially for such automotive service jobs as body work, automatic transmissions, instrument panel, heaters, air conditioning and accessories.

- Weighs only 4 1/2 lbs.
- Overall length: 5 1/8"
- Natural trigger finger control
- Hand formed grip
- Foolproof reverse valve
- Rubber nose seals out dirt
- Famous I-R Multi-Vane air motor backed by over 50 years' experience

Write for descriptive flyer — Form 5227.

Ingersoll-Rand
11 Broadway, New York 4, N.Y.

18-545

130

Selection System

Continued from Page 128

areas need further questioning, from the manner of the response over the phone.

Summary and evaluation is most important section of the application blank. It takes up most of the last page. It's reproduced on page 81.

The first page lists the factors affecting the applicant's basic capacity for doing the job. The other three parts rate his psychological and character make-up to determine whether he is likely to make the most of his basic capacity. They include basic habits, motivation and emotional maturity.

Here again the interviewer is forced to weigh values carefully by checking each item as being "outstanding," "good," "marginal" or "poor." He can't escape making a judgment! If a certain quality is neither outstanding nor poor, it still must be judged as being either acceptable or dubious.

In this way the applicant with "average" qualifications, who appears to be a "regular guy," can still be graded. It is this analysis of the regular guys that separates the sheep from the goats—the 80 per cent of those employees who turn sour soon after hiring. This depends, of course, on how many of these average qualifications prove to be marginal, and how many appear to be good or acceptable.

On the strength of a careful summary and evaluation after the patterned interview, the station manager can make his overall rating with considerable confidence. This, too, gives four choices, (1) a prime prospect, (2) promises competence, (3) mediocre prospect to be hired only in a tight labor market, and (4) a dud not to be hired under any circumstances.

Steps in screening an applicant do not ordinarily follow the sequence in which they appear on the application blank. It is advisable to make the telephone checks prior to the patterned interview. This enables the interviewer to question discrepancies between the appli-

cant's entries on the first page of the form and responses from previous employers.

As described here, interviewing an applicant sounds arduous and time-consuming. Actually, after a little practice it can be handled quickly and easily.

The station clerk can see that the applicant fills out the first page. This takes five or ten minutes at most. The station manager then takes the same length of time to study the entries in private. Half the applicants will be eliminated at this point for obvious disqualifications (age, experience, draft status, etc.).

The phone check takes five to 10 minutes. The patterned interview lasts from 15 to 20 minutes. Most questions in the interview can be answered briefly. Few involve much discussion.

The driving test can be delegated to a responsible subordinate. Summary and evaluation after the interview can also be made quickly. As one station manager put it, "By the time I've finished giving a patterned interview I know more about a man that I used to know after he'd been working for us for a year."

If the applicant survives the interview, he faces further testing. This involves the station manager only for study of the results. The tests themselves can be administered by the station clerk.

These last are psychological tests mostly, and have been used on prospective employees at Dowell for the past seven years. They consist of the Otis quick scoring mental ability test, the Humm-Wadsworth personality profile, the Kuder preference survey and a mechanical ability test.

END

Please Resume Reading Page 82

Tanker Driver: "Here, Mabel, I have a complaint. This steak isn't very tender."

Diner Waitress: "Well, Mac, if it's affection you want, I'll give you the telephone number of that cute little blonde trick, who's new behind the counter."



...the only electric power wrench... with automatic shut-off torque control



• This selector knob engages the automatic shut-off device... the unique feature essential to true torque control. Yours at no extra cost!

No other electric impact wrench on the market gives you this modern, essential feature. Use it as a standard Impactool, with all the advantages of a multi-purpose tool. Add a Torsion-Bar attachment... engage the built-in selector knob... and you have the only positive Torque Control impact wrench available today. Buy complete now... or add the Torsion-Bar attachments later. Ask your I-R Jobber for an obligation-free demonstration now!

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F RUEHAUF INVESTS ... YOU EARN !

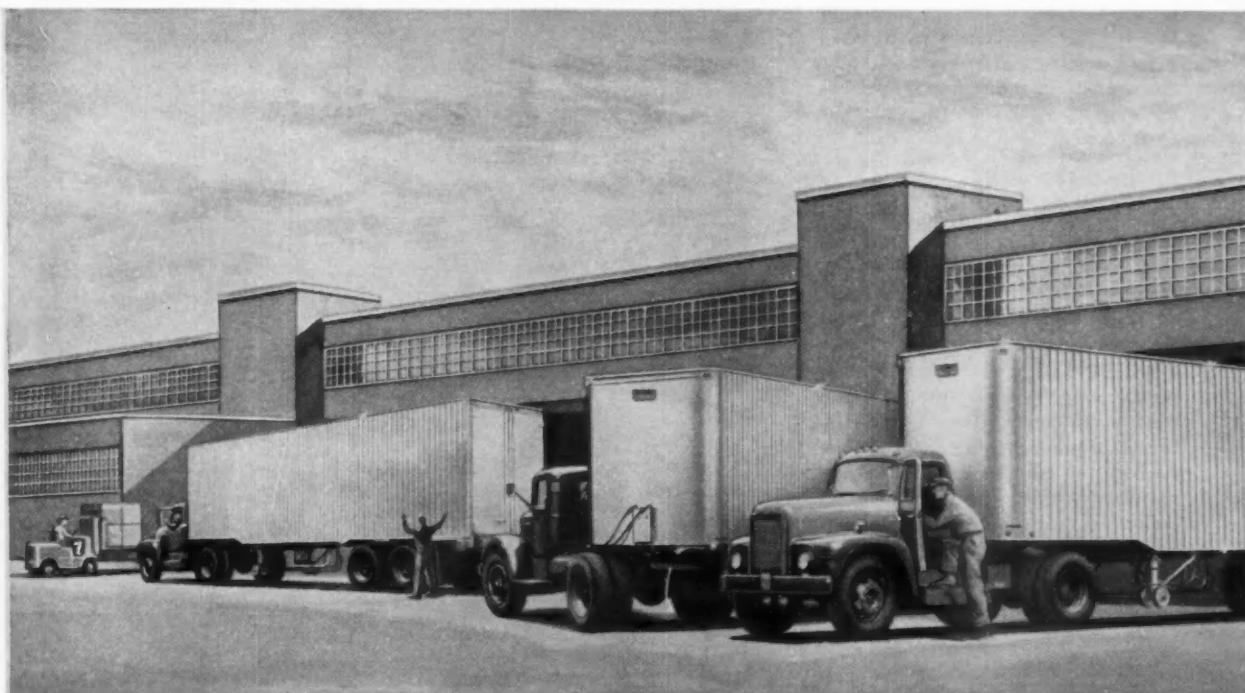
Another pioneering venture instituted by Fruehauf to expedite truckers' growth and profits is the Trailer Lease. You pay as you earn.

When your capital is badly needed for terminal facilities and other expansion expenses, you can now increase your fleet simultaneously, without further investment, by leasing. Any type of Fruehauf equipment, including high-profit Volume★Vans, is available at a practical monthly rate, for periods of 6 months or more. What's more, Fruehauf will buy your used Trailers.


Enjoy the benefits—and the earnings—of newer or more equipment without the investment problems—at a cost very close to that of ownership.

Investigate this new Fruehauf service now—to grow now.

Fruehauf Trailer Company, 10941 Harper Avenue, Detroit 32, Michigan.



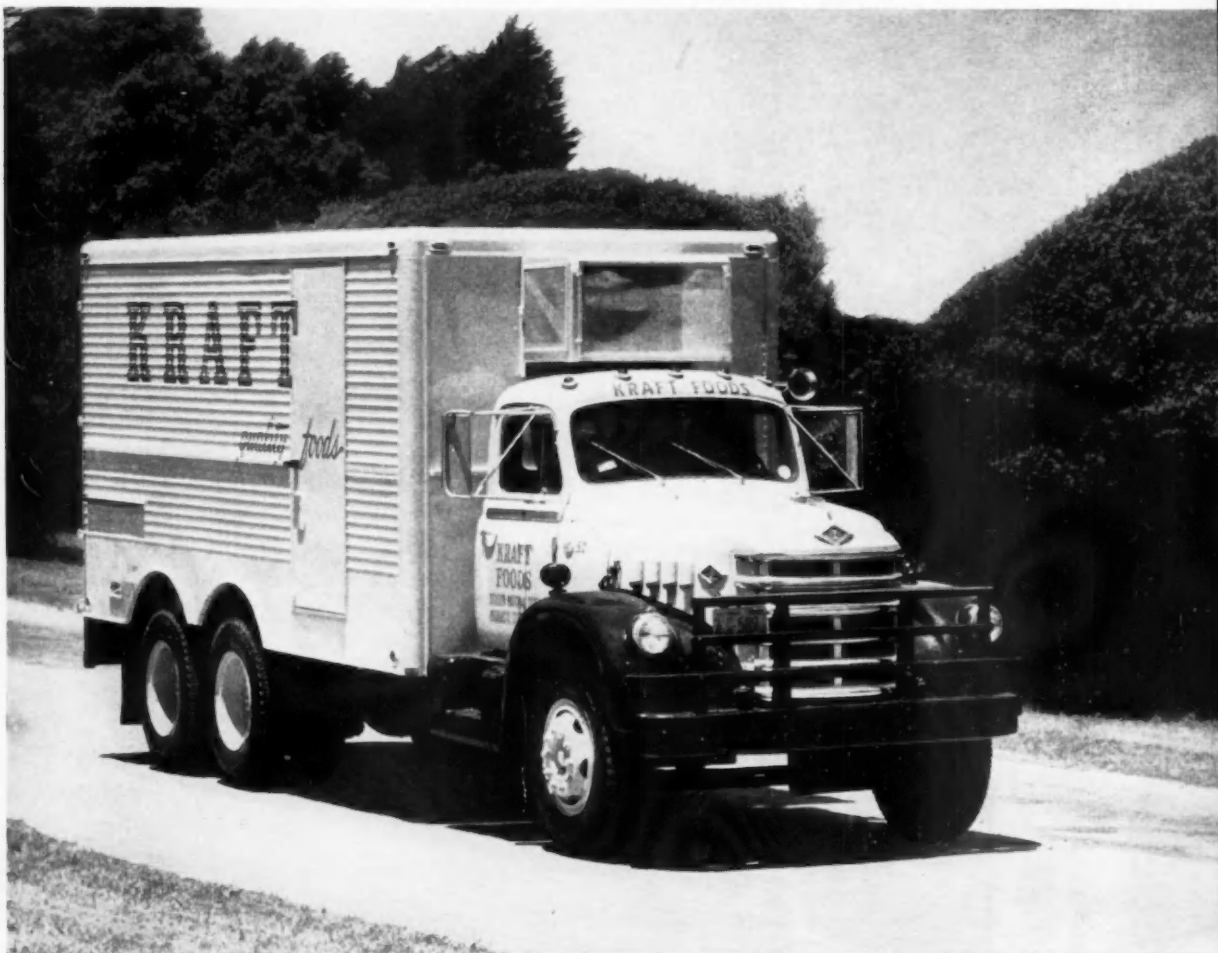
**LEASING—ANOTHER FRUEHAUF SERVICE TO THE HAULING INDUSTRY
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Leased equipment, available from
6 months and up from Fruehauf,
gives you any number of new or
used Trailers for expansion with
no capital outlay.

FRUEHAUF TRAILERS

"ENGINEERED TRANSPORTATION"



18-foot refrigerated aluminum truck body, fabricated by the California Bodies Company of Los Angeles, shown here on its way to a delivery near San Francisco.

How Kraft Foods carry more tonnage

During 1955, Kraft Foods fleets rolled 76 million miles. Then Kraft switched to aluminum.

In 1956, their aluminum trucks traveled 88 million miles, carried more tonnage, yet 120 fewer trucks were used!

Here are some of the facts Kraft engineers found out about aluminum truck bodies and trailers . . . facts that added up to savings of hundreds of thousands of dollars.

Bigger Payloads. Kraft found that an 18-foot aluminum truck weighs 1500 pounds less than its steel equivalent; a 12-foot aluminum unit weighs 850 pounds less. These weight savings, plus new design features made possible by aluminum, resulted in payload increases up to 2000 pounds.

Lower Operating Costs. Because aluminum trucks and trailers are so much lighter in weight, Kraft received ad-

ditional savings in reduced wear on tires and less fuel consumption on empty runs.

But it was aluminum's high degree of heat reflectivity that really cut operating costs. Approximately 80 per cent of Kraft trucks are refrigerated. In actual tests between steel and aluminum refrigerated trucks conducted in Phoenix, Arizona, Kraft found that refrigeration units on aluminum trucks consumed less fuel to maintain the same temperature as units on steel trucks.

This amounted to a fuel saving of \$2.06 an hour. Furthermore, since aluminum refrigeration units proved one-third more efficient than steel, a 20 per cent reduction in both size and operating time of units was possible.

Lower Maintenance Costs. Because aluminum is rust-proof, painting is unnecessary, making possible an estimated savings of \$100,000 a year.



12-foot walk-in aluminum body for city store deliveries; sold by J. B. E. Olson Corp., New York City; designed and fabricated by Aerobilt Bodies, Inc., a subsidiary of Grumman Aircraft.

... more miles with fewer trucks

And, since aluminum is *highly workable*, aluminum trucks and trailers could be repaired in a fraction of the time it took to repair steel trucks. In one instance, an aluminum unit was repaired in four days, while two and a half weeks would have been needed to repair equivalent damage on steel.

Let a Kaiser Aluminum engineer show how you can get larger payloads, more economical operation and less maintenance by switching to truck and trailer bodies made with light, strong Kaiser Aluminum.

For immediate service call the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office*, Palmolive Bldg., Chicago 11, Illinois; *Executive Office*, Kaiser Bldg., Oakland 12, California.



THE BRIGHT STAR OF METALS

SEE "MAVERICK" • SUNDAY EVENINGS, ABC-TV NETWORK

CONSULT YOUR LOCAL TV LISTING

Aim Dual Headlights with Care

Continued from Page 67

is the dual filament, No. 2. Aiming procedure is the same for either set-up.

In aiming dual headlights, you'll have to take into consideration . . .

1. State laws and requirements.
2. Type of suspension.
3. Load conditions.

During the past year, most states modified their headlight aiming requirements to permit maximum road lighting with the four headlight system. This discussion follows the basic pattern set in these requirements. However, since there may be a differ-

ence in some respects in your state, you'd better correlate the aiming here with your state's specifications. Chances are they'll agree, but it's wise to check.

More changes are due in state headlight aiming regulations. Reason is the introduction of air suspension systems on passenger cars. (Only truck maker offering air suspension at present is GMC.) State aiming requirements are based on aiming passenger car lights with the car empty, have a "built-in" allowance for the change in beam height when passengers are added.

However, air suspensions are usually of a "constant level" type. That is, when a load is placed on them, the system adjusts automatically to exert an equal upward pressure and maintain the same level loaded as empty. Thus the allowance for beam change is no longer valid.

On trucks with spring suspension, it's best to aim the headlights with the vehicle under load. Reason is it's practically impossible to compensate for difference in height between load and no load due to spring deflection, tire spread. There can be as much as nine inches difference.

Most basic way to aim headlamps is with a headlight screen placed 25 ft from the vehicle on a level floor. (During the coming year, you can expect manufacturers to come through with dual headlight aiming equipment or kits to adapt your present equipment.)

Aiming starts

with the No. 1 or inside lamps. Cover the outside (No. 2) lamps, and aim the No. 1's so the center line of the high intensity zone falls two inches below the horizontal center line of the lamps (Fig. 3). The high intensity spread should be evenly divided right and left of the vertical center line of the lamp. State regulations usually allow a tolerance of two inches up or down from horizontal aiming line, six inches right or left of vertical center line.


Now switch to the low beam filament in the No. 2 or outside (TURN TO PAGE 142, PLEASE)

A U T O P U L S E

ELECTRIC FUEL PUMPS

NOW

A
MEMBER
OF THE
WALBRO FAMILY
OF PRODUCTS



- On October 19, 1957, we acquired the patents and certain of the assets of Autopulse Corporation.

On October 25, shipments were resumed from the Ludington plant. For the foreseeable future, all Autopulse operations will continue at the same address—218 E. Dowland Street, Ludington, Michigan.

New Autopulse products, service parts, and rebuilt Autopulse pumps will continue to be available through the distribution organizations which carried the line at the time of the dissolving of the Autopulse Corporation. Contract arrangements will be completed as rapidly as possible.

The Walbro policy of constant product improvement, which has won the acceptance enjoyed by our carburetors and related parts, will apply to the Autopulse line. Both trade customers and ultimate users are assured that Autopulse and Walbro engineering will keep the line ahead of the field in quality, value, and improvement.

W. E. Woepfle
PRESIDENT



WALBRO CORPORATION
6242 Garfield Street • Cass City, Michigan



A Stainless Steel tank truck operated by Chemical Tank Lines, Inc.

"The versatility of Stainless Steel tanks decreases deadheading by 20%,"

says Thomas R. Greenleaf, Assistant to the President, Chemical Tank Lines, Inc., Downingtown, Pa.



"WE HAVE BEEN HAULING nitric acid and other corrosive chemicals in Stainless Steel tanks since 1947," explains Mr. Greenleaf, "and we have found Stainless Steel vessels to have an indefinite life span, easy to clean, non-corroding and stain-resistant. The variety of materials that can be carried in the tanks, coupled with the comparative ease and speed of cleaning, spells out a minimum of non-productive time.

"Over 100 of the tanks in our chemical fleet are made of Stainless Steel. The weights of products carried in these tanks vary from 6½ pounds to 15½ pounds per gallon, and temperature ranges vary from 0° F. to 200° F. The tanks operate from 16 to 20 hours daily.

"We use Stainless tanks for any product requiring maintenance of purity and color, and where ease of cleaning after delivery is of prime importance. Fast and efficient washing is greatly facilitated by the polished finish of the Stainless Steel which does not absorb the materials

shipped and, therefore, lends itself to comparatively simple cleaning processes. Faster turn-around is a direct result of ease of cleaning. Stainless Steel tanks are ready for a return trip in about 3 to 4 hours after their arrival at the terminal. Chances of eliminating deadheading are also greatly increased because of Stainless Steel's ability to handle an almost unlimited variety of products. The versatility of these tanks is exemplified by our initial shipping of, for example, synthetic resins or formaldehyde and returning with a pharmaceutical grade product. In addition, Stainless Steel insures purity of the product because there is rarely a problem of staining or corrosion.

"We estimate that the versatility of Stainless Steel tanks permits us to utilize only three trucks where we might otherwise require five to meet the same schedule. This obviously means fewer tanks, tractors and personnel required, less housing and maintenance facilities and increased income," concludes Mr. Greenleaf.

United States Steel Corporation, Pittsburgh • American Steel & Wire Division, Cleveland • Columbia-Geneva Steel Division, San Francisco
National Tube Division, Pittsburgh • Tennessee Coal & Iron Division, Fairfield, Alabama • United States Steel Supply Division, Warehouse Distributors
United States Steel Export Company, New York

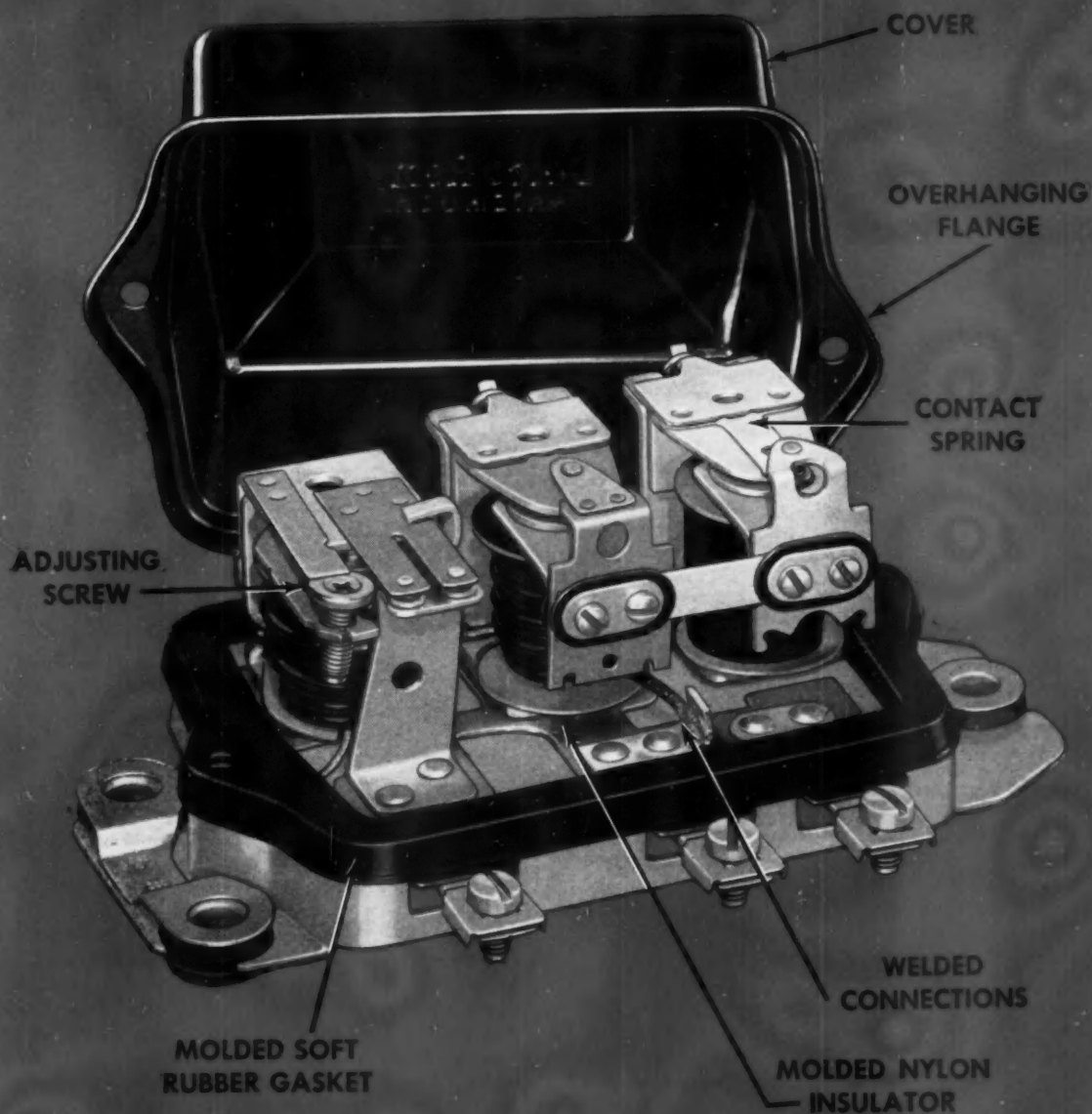
USS STAINLESS STEEL

SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS



UNITED STATES STEEL

PROGRESSIVE ENGINEERING MAKES THE DIFFERENCE



DELCO-REMY WATERPROOF STANDARD REGULATORS IMPROVE FLEET PERFORMANCE

Better electrical performance and greater dependability in any weather are important benefits to fleet operators found in Delco-Remy's waterproof standard generator regulators, now available for general replacement use.

And here are the features that make them the *right* regulators for Delco-Remy equipped cars and trucks in fleet operations.

- ① New overhanging one-piece formed-steel cover and mating base shed road splash . . . convenient attaching screws are *outside* the enclosed area. Molded soft rubber gasket seals out harmful oil and water vapors.
- ② Integral sleeves of molded nylon insulator form permanent seal around rivets—assure watertight base.
- ③ New, longer, more flexible armature contact spring on voltage regulator unit assures more positive closing of contact points for smoother operation.
- ④ Welded electrical connections, and highest quality tungsten and non-tarnishing precious metal contact points, assure minimum resistance, maximum durability.
- ⑤ Special fine thread screw-type controls allow easy, highly accurate adjustment of all three units.

Always replace with Delco-Remy waterproof regulators when you service Delco-Remy equipped cars and trucks. These improved regulators, built to highest quality standards by the original equipment manufacturer, are available from your car or truck dealer or the United Motors System.

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY—STARTING WITH

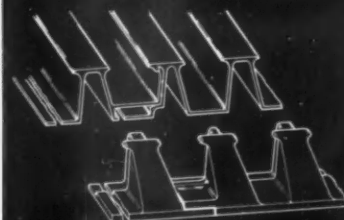
Delco-Remy

ELECTRICAL SYSTEMS

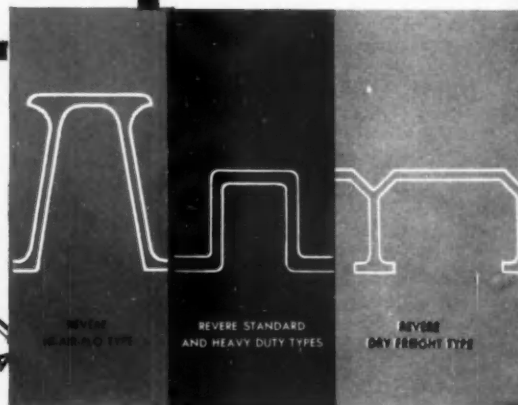
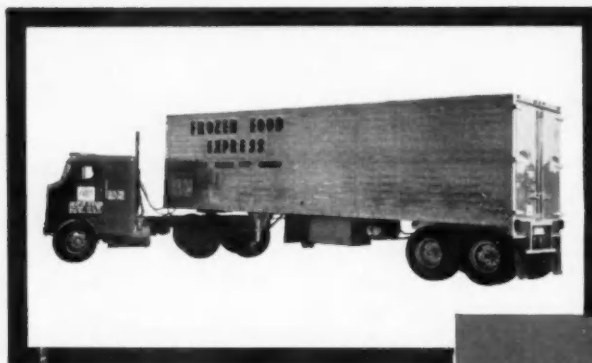
TRUCKERS SAY—*best floors ever!* *Revere patented*



Shown here are two of Revere's many contributions to the trucking industry: Revere Hi-Air-Flo floor sections, and the patented Revere interlocking design.

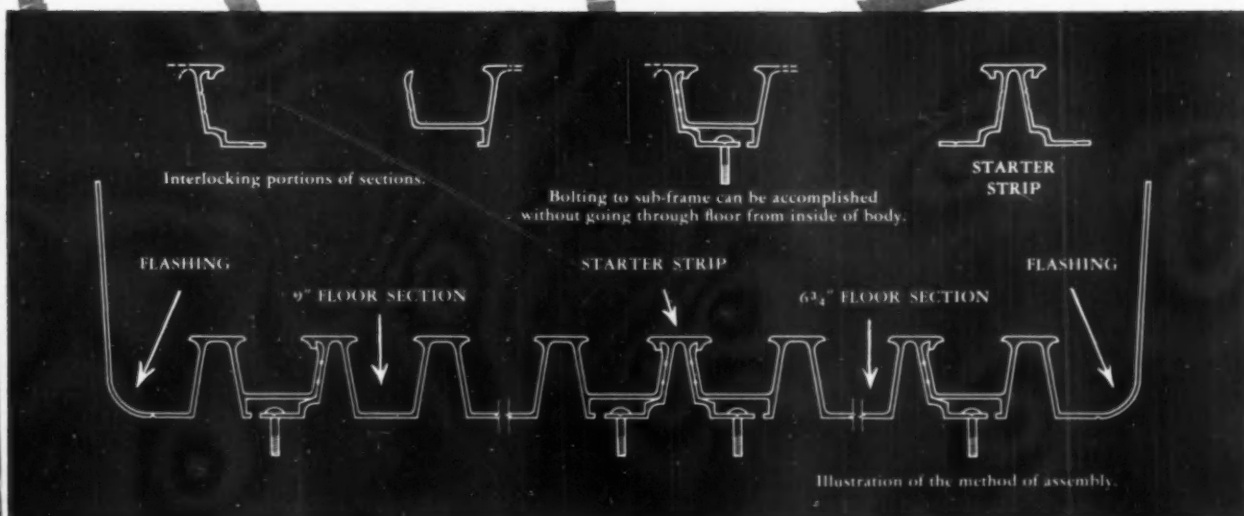


MULTI-END-PLUG CASTING
(Exploded view)



REVERE COPPER AND

HI-AIR-FLO ALUMINUM REEFER FLOOR SECTIONS



New—to meet the growing demand for increased air circulation under and around the cargo in reefer bodies—these Hi-Air-Flo aluminum floor sections developed by Revere bring you many advantages.

Examine the details of the design. Note the $\frac{3}{8}$ " increased height of the new Revere sections, which provides 60% more space for air circulation. Check the new contours, engineered for full load-bearing capacity despite the increased height, and with the minimum increase in weight. And notice how the design provides a safety factor by preventing wheels from becoming wedged in the tapered channels.

And that is not all! Revere's special interlocking feature* which has been so enthusiastically received in other Revere floor sections has been incorporated into the Hi-Air-Flo design. It speeds up and simplifies floor construction. With proper installation it insures a watertight floor. It permits bolting the boards to the sub-frame without going through the floor from inside the body. There are no exposed bolt heads, and no bolt holes through which water could leak.

The Hi-Air-Flo sections also retain Revere's unique starter strip feature. Starter strips, available in a choice of three widths, are laid at or near the center line of the body and the floor is built outward toward each side. This feature further simplifies installation and, in case of an accident in service requiring floor repairs, only that side of the floor need be taken up to which damage has occurred.

In addition, the new Hi-Air-Flo floor includes aluminum Multi-End-Plug Castings as in Revere's other reefer floors. These have been extremely popular with body builders and truck operators alike because they save hours of time in sealing the ends of the floor boards and flashing, and protect the ends so thoroughly against materials handling trucks. And they look neat.

FOUR TYPES OF REVERE ALUMINUM FLOORS NOW AVAILABLE

There are four types of Revere floor sections now available: Hi-Air-Flo ($1\frac{1}{8}$ " depth); both Standard and Heavy-Duty ($1\frac{1}{4}$ " depth); and Revere Dry Freight Floor Sections ($1\frac{1}{4}$ " overall height). All have Revere's patented interlocking design and all embody the important starter strip feature. All reefer sections can be furnished with multi-end-plug castings. Almost any specific width of floor can be built with Revere sections.

Heat treated aluminum alloys are generally used for floor sections, but for extra heavy loads Revere floors can be supplied in the high-strength heat treatable alloys. A Revere Technical Advisor will be glad to consult with you about this and other matters pertaining to the use of metals.

Write or phone today for full details on all Revere Aluminum Floor Sections. Ask your body builder, automotive parts distributor or the nearest Revere Sales Office for complete information.

BRASS INCORPORATED *Founded by Paul Revere in 1801*

230 Park Avenue, New York 17, N. Y. Sales Offices in Principal Cities



Aim Dual Headlights . . .

Continued from Page 136

lamps. The square area of the high intensity zone should fall just below the horizontal center line of the lamps and just to the right of the vertical center line of the lamps (Fig. 4). (Aiming the low beam automatically aims the high

beam filament in the No. 2 lamp.) Aiming tolerance here is the same as for the No. 1 lamp.

Many attempts

at aiming fail because the need for sensitive aiming adjustment is not fully appreciated. Slight errors in height of the headlight beam on a screen 25 ft ahead of vehicle will noticeably affect road illumination. For example, if the beam is aimed five inches below a

horizontal line on such a screen, it strikes the roadway only 150 ft ahead of vehicle, giving very poor visibility. When aimed one inch below horizontal line, the beam strikes roadway 750 ft ahead of the vehicle, increasing glare in eyes of approaching drivers with a definite loss of visibility.

In servicing dual headlamp systems, voltage is an important factor, particularly in the high beam circuit where two sealed beam units are connected to one feed wire. Headlight voltage must be measured with lights burning and battery in fully-charged condition.

To check voltage

remove headlight rim and—with sealed-beam unit partially removed from the connector but still connected—attach leads of the voltmeter to the prongs of the No. 1 sealed-beam unit. With only lights burning (no other electrical load), engine warmed up and running at speed equivalent to a vehicle speed of about 20 mph, voltage at headlights should not be less than 13.25 volts, or more than 14.5 volts.

On the No. 2 lamp, two readings should be taken—one on the high beam connection and one on the low beam connection. In both cases, the other leg of the voltmeter should be on the ground connection.

If voltage is low

at either headlight socket proceed as follows: First, test voltage output of battery. It should be 12 to 12.5 volts. Clean and tighten battery terminals and ground cable. Then, check wires and connections to all lights as well as main headlight switch and dimmer switch for high resistance.

When voltmeter is placed between ground and input side of switch and then between ground and output side of switch (with lights burning), the difference in readings will represent the voltage drop in switch. The same method is used in checking voltage drop in wires by taking reading at each end of wire. A switch or wire showing voltage drop of more than 0.1 volt should be replaced.

END

Please Resume Reading Page 68

You Can Build Better Value in your TRUCK BODIES



Body by Winter-Weiss Co. Denver, Colo.

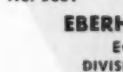
33 USED
Hinge
No. 5832



16 USED
Box Door Lock
No. 4853



11 USED
Van Door Lock
No. 5631



with
EberHARDWARE

A well designed, ruggedly constructed body requires good hardware to fulfill its purpose.

Poor hardware wears unduly and breaks under stress—reflecting upon the ability and policies of the builder.

Fully realizing these truths Eberhard has always made products of quality—a fact that is fully appreciated by better builders in the industry.

You'll find everything you need in the Eberhard line, and you can install and recommend them with assurance that they "will not let you down".

Write for the Catalog

EBERHARD MANUFACTURING COMPANY

Evarts Ave. • Cleveland 14, Ohio
DIVISION OF THE EASTERN MALLEABLE IRON COMPANY

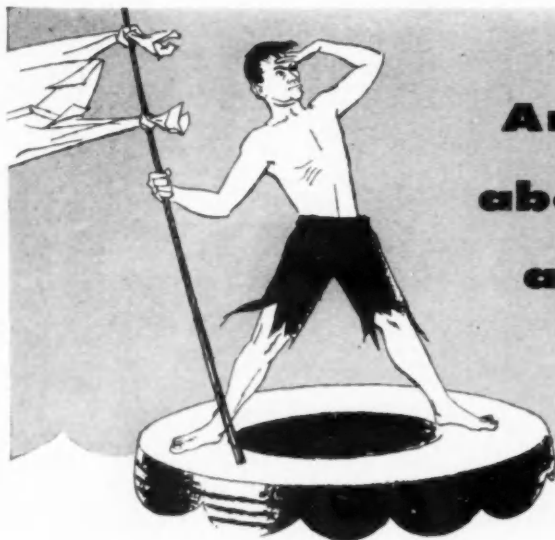
LONGRUN



TRUCK BODY
HARDWARE BY

EBERHARD

THE MOST COMPLETE LINE AVAILABLE



**Are you "AT SEA"
about truck tire costs
and the right tires
to buy?**

**IF YOU ARE and would like to have your tire
needs analyzed without obligation or high-pressure
sales talk, ask for a "TIRE NEEDS ANALYSIS"**

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Seiberling Rubber Company
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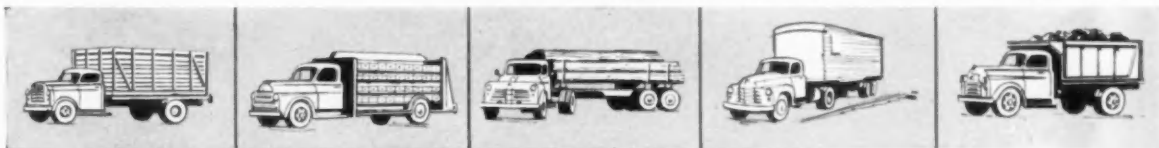
CCJ

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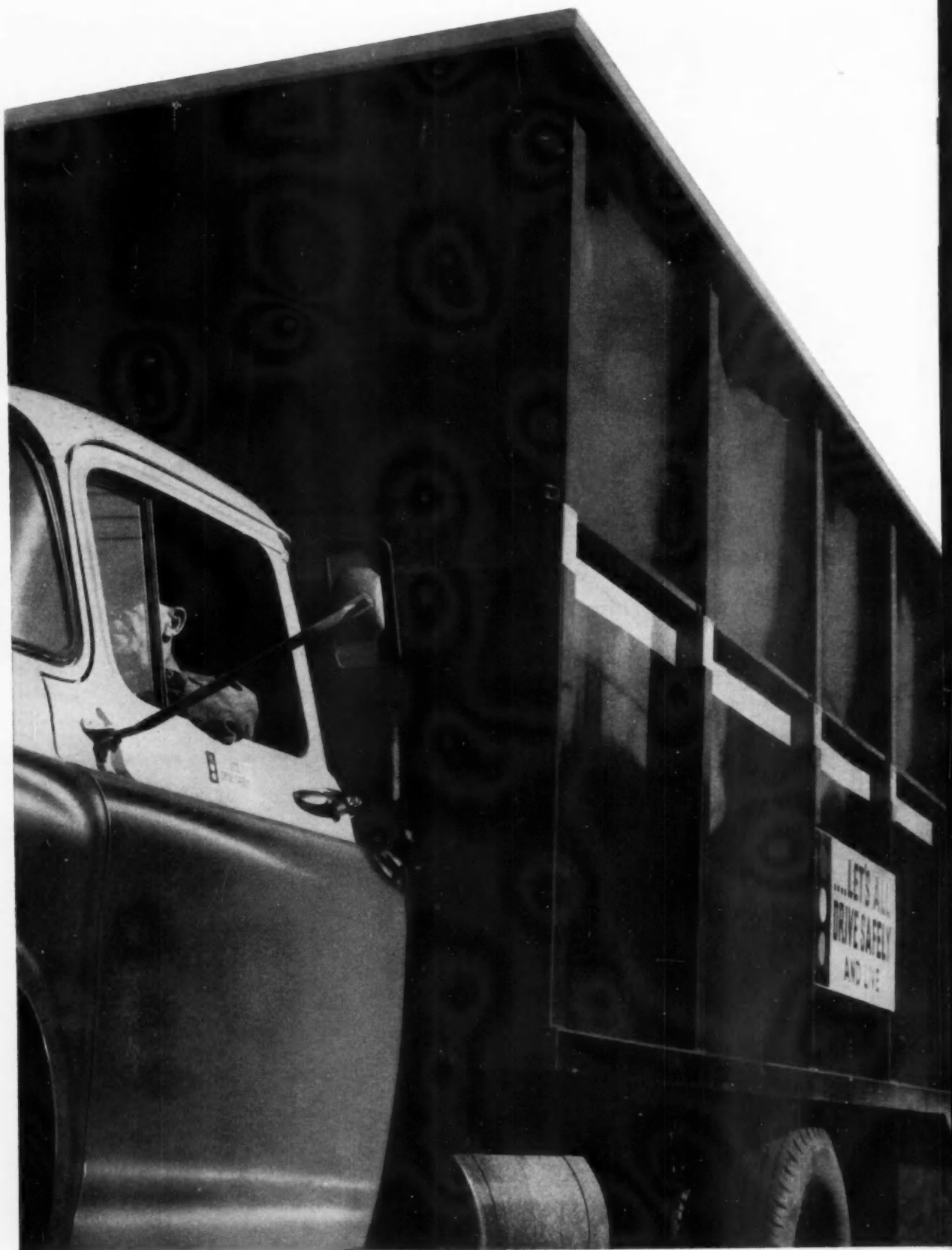
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Street City State



SEIBERLING BUILDS A QUALITY TIRE FOR EVERY ROAD AND LOAD



THAT BEATS EVERY OTHER TIRE FOR LOWER COST PER MILE



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Get full-rated power...with **GOOD GULF**

When you're moving **BIG** loads, on tight schedules, you want your truck engines to deliver all the power that was built into them! That's why you'll be farther ahead with Good Gulf gasoline.

Good Gulf helps truck engines deliver their full-rated power. Here's why: Good Gulf is cleaner burning . . . is gum-free, and knock-free . . . has exactly the right volatility.

If your rugged operations call for a high grade gasoline—one that helps you eliminate sticking valves, dirty oil rings and cylinder wear, combustion chamber deposits, burned exhaust valves—change to Good Gulf. Haul those big payloads with engines giving everything they've got . . . flattening the hills with power to spare!

For more information on Good Gulf, the gasoline that helps you get top mileage, maximum power, call your Gulf Sales Engineer . . . or mail the coupon today.



THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS

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GET MORE FACTS ON GOOD GULF GASOLINE! MAIL COUPON TODAY!

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Gentlemen: Please rush me your illustrated booklet on Good Gulf gasoline!

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STOP

with...

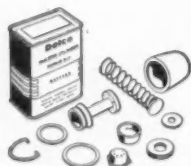
DELCO SUPER 11 IMPROVED WITH HTD MEANS MORE SAFETY, BETTER SERVICE FOR YOU BECAUSE IT

- Surpasses S.A.E. and government specifications for heavy-duty hydraulic brake fluid!
- Won't boil away or lose effectiveness when brakes get hot!
- Flows smoothly and easily in coldest weather!
- Is compatible with all brake systems' rubber and metal parts!
- Is chemically inert, physically stable!
- Is packaged in containers holding from one pint to 54 gallons!
- Is available everywhere through the United Motors System and General Motors car and truck dealers!

MORE SAFE STOPS—LOWER OPERATING COSTS!



DELCO LINED BRAKE SHOES
Made and assembled to original equipment specifications.



MASTER CYLINDER REPAIR KIT
All parts needed to put master cylinder in normal operating condition.



WHEEL CYLINDER REPAIR KIT
All parts necessary to put wheel cylinder in normal operating condition.



MORaine POWER BRAKES
Complete units and service kits for General Motors vehicles.



Moraine Products

Division of General Motors, Dayton, Ohio

GO

with...

LOOK AT THE VALUES MORaine GIVES YOU . . .

- A complete engine bearing line, with a bearing for every car, bus and truck replacement job!
 - Precision-made to extremely close tolerances, to handle higher bearing loads!
 - High embedability . . . good corrosion resistance . . . strong resistance to fatigue!
 - Quality that stands up through miles and miles of operation!
 - A convenient source of supply—readily available through the United Motors System and General Motors car and truck dealers!
- LONGER BEARING LIFE—LOWER OPERATING COSTS!**



MORaine-400 BEARINGS
Toughest automotive engine bearings ever made!



MORaine BI-METAL BEARINGS
Precision-built to original equipment specifications.



M-100 BEARINGS
Excellent fatigue resistance and longer life expectancy.



MORaine GAS FILTERS
Glass-bowl and pancake all-metal types assure dirt-free, tint-free fuel under all operating conditions.



Moraine Products

Division of General Motors, Dayton, Ohio

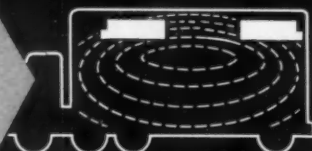
you can depend on...

ANY WAY YOU USE IT

DRY-ICE
TRADE MARK

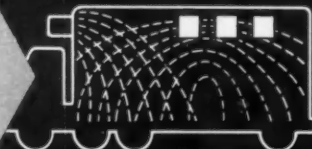
100% "DRY-ICE" PROTECTION

As the sole refrigerant, rely on Pureco "DRY-ICE" for safe, dependable, dry-cold. Eliminates maintenance, light-weight—more pay load. Several types of "DRY-ICE" bunkers available.



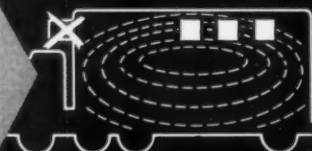
AUXILIARY REFRIGERATION

Use "DRY-ICE" to supplement mechanical units and eliminate "hot spots".



EMERGENCY REFRIGERATION

Use "DRY-ICE" when mechanical parts break down. No spoilage. It handles easily and is quickly available through the Pureco network of depots.



You can count on Pureco "DRY-ICE"... and Pureco service. Pureco Technical Sales Service will be glad to study your particular refrigeration problems and help you solve them.

Remember—over 100 Pureco depots from coast to coast are your assurance of dependable deliveries of "DRY-ICE".

Pureco distribution points are all listed in a handy booklet—call or write today for your copy.



Pure Carbonic Company

A division of Air Reduction Company, Incorporated
Nationwide "DRY-ICE" service-distributing stations in principal cities
GENERAL OFFICES: 150 EAST 42nd STREET, NEW YORK 17, N. Y.

AT THE FRONTIERS OF PROGRESS YOU'LL FIND AN AIR REDUCTION PRODUCT

Studebaker 1958 Trucks

Series	Wheel-base (in.)	Maximum GVW (lb)	Nominal Rating (tons)	Engine (cu in.)
3E5	112, 122	4,800	1½	185.6
3E6-7	112, 122	5,000	1½	245.6 259.2
3E11-12	122	7,000	2¼	245.6 259.2
3E13-14	131	10,000	1	245.6 259.2 ¹
3E28	131, 155	14,000	1½	259.2 ¹
3E38	131, 155 171, 195	16,500 17,000	2	259.2 ¹
3E40	131, 155 171, 195	18,000 19,000	2HD	289

¹—289 optional.

'58 Studebaker

Continued from Page 94

with the best traction under icy, slippery, or off-highway truck operating conditions.

In the light-duty

line, wheelbases of 112, 122, and 131 in. will be available with gross vehicle weight ratings from 4800 lb in the ½-ton model to 10,000 lb in the 1-ton model.

In the medium-duty

line of 1½ and 2-ton trucks, four wheelbases will be available ranging up to 195 in. for the 2-ton model. The 195-in. wheelbase is designed to accommodate 16 to 18-ft vans, stakes or special bodies. Other models include factory installed 9 through 14-ft stake and platform bodies.

In the heavy-duty

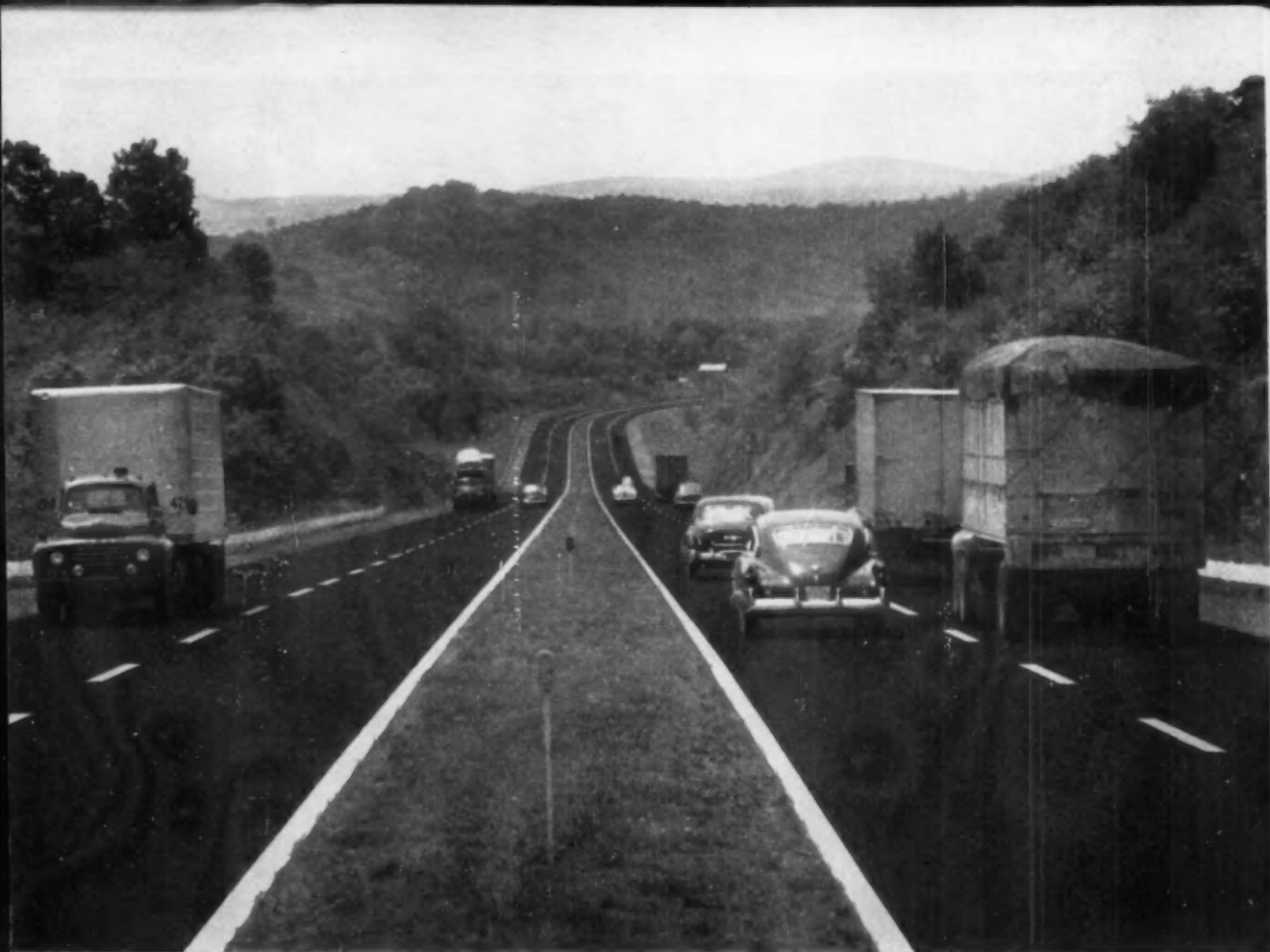
line there will be four chassis and cab models. Factory installed platform-stake bodies will be available in 9, 12, and 14-ft lengths. Wheelbases of 131, 155, 171 and 195 in. will be used.

Heavy-duty front

axles with a carrying capacity of 5000 lb and rear axles with a carrying capacity of 15,000 lb will be used with these units. A 6.8 to 1 rear axle ratio is standard with a 6.2 to 1 ratio optional at no extra cost for higher road speed and greater economy. Two-speed rear axles with electric shift will also be available. The new trucks will have three-stage rear springs.

END

Please Resume Reading Page 96



Chassis grease additive forms lasting film... extends effective lubrication...reduces wear

Under severe operating conditions, shock loading, reciprocating and oscillating motion may wipe conventional chassis greases off bearing surfaces, or force them out of the bearing area. For such rugged service, a chassis grease containing the additive Moly-Sulfide proves extremely effective in extending effective lubrication and reducing wear.

When Moly-Sulfide is present between rubbing surfaces, it adheres to the metal and forms a protective film—preventing welding, fretting and galling. Lubrication engineers and maintenance specialists who specify chassis lubricants containing a minimum 3% of Moly-Sulfide find that it extends substantially the useful operating life of vital parts.

Auto manufacturers, too, have recognized Moly-Sulfide's superior properties. Several leading man-

ufacturers recommend Moly-Sulfide chassis grease to reduce noise and wear in such important parts as ball joints, spline drives, and torsion bar gears. One automobile manufacturer applies Moly-Sulfide grease at the factory as a break-in lubricant for rocker arm pivots.

Where can you get Moly-Sulfide chassis grease?

Chassis greases containing Moly-Sulfide are available nationally. For a list of manufacturers of these greases—which includes several major oil companies—write for Bulletin Lu-2A. And, for a copy of "Molybdenum Disulfide as a Grease Additive," write for Bulletin Lu-17. Write Department 70, Climax Molybdenum Company, 500 Fifth Avenue, New York 36, N. Y.



DRY TRANSIT—Leaf tobacco required the utmost protection and care to safeguard it against spoilage during transportation. Especially damaging to tobacco is moisture. For this reason, the Winston Leaf Tobacco & Storage Co., Inc. of North Carolina utilize this special truck cover for transporting baskets of perishable leaf tobacco from the local warehouse floors. The side curtains are meticulously tailored and so arranged that they can be rolled up or opened individually as conditions may require. Possibility of exposure is virtually eliminated by means of these unique covers manufactured by Dize Tent and Awning Company from Mount Vernon Duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc. and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

UNIFORMITY
Makes The
Big Difference
In Industrial
Fabrics



Mount Vernon Mills, inc.
A LEADER IN INDUSTRIAL TEXTILES

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Should Users Pay 100%?

Continued from Page 84

largest fleets in the country, with vehicles in the Defense Dept. including some of the heaviest in use.

Just as important are the federal benefits arising from the availability of adequate highways for "standby service." The standby service, it has been pointed out, cannot "be measured by the traffic mileage of government vehicles with much greater validity than the value of the Strategic Air Command during the past decade could be measured by the number of atomic bombs it has dropped on enemy targets."

In brief, here are specific examples of federal uses of and benefits from highways:

As Major General Yount, Chief of Transportation, Dept. of the Army, testified before Congress, "a uniformly designed, efficient system of connected highways, interstate in character, is essential to national

defense." Since effective national defense is not merely a wartime measure commencing with hostilities, the road plant must be in readiness.

Military operations and civil defense require a transportation system of high order through-



"By th' way, th' cigarette lighter don't work either!"

out all sections of the country. In particular, it is necessary to the maintenance of the military establishment for troop movement, transport of supplies, and the uninterrupted flow of essential production. It will also greatly implement the responsibilities of the Civil Defense Administration, such as evacuation, relief of the injured and displaced, and reorganization of cities after attack.

The 1956 Federal Aid Highway Act establishes uniformly high design and construction standards for an Interstate System designated with Defense Dept. approval, and gives top priority to construction of this system, including circumferential routes through, into, and around metropolitan districts of primary importance.

Post Office Dept. is one of the most extensive users of highways. Highway developments and continued improvements over the past 40 years have made it possible for the government to keep mail service apace with a growing popu-

(TURN TO PAGE 156, PLEASE)



BRIMCO BRAKE

Independently Actuated Hydraulic Braking System

BRIMCO BRAKES provide PERFECT CONTROL at ALL TIMES, on SLIPPERY ROADS, STEEP GRADES, in EMERGENCIES.

BRIMCO BRAKES eliminate danger from:

- Frozen valves or air chambers
- Loss of air pressure
- Engine or compressor failure
- Trailer breakaway

BRIMCO BRAKES are independently actuated by a double-action hand pump, installed inside cab where it will be most convenient for driver use.

Positive SMOOTH APPLICATION is built into BRIMCO BRAKES.

OUTSTANDING OPERATIONAL FEATURES:

THE BRIMCO BRAKE system and the regular air or vacuum brake system work entirely independently of each other, but can be easily applied together without adversely affecting the operation of either system.

Tractor and trailer installation is protected by break-away coupling which leaves tractor fully protected in event of trailer break-away.



a simple "twist of the wrist" provides:
• SURE SETTING of brake pressure
• PRESSURE RELEASE under FULL CONTROL



Saves up to 200 pounds in weight over old conventional parking brakes.

QUICK • EASY • ECONOMICAL INSTALLATION

Has been reviewed by ICC and ATA Meets ICC Requirements.

Some Distributorships and Dealerships still open.

Available at all WHITE MOTOR TRUCK DEALERS and many other truck equipment dealers.

Ask your dealer for further information or write:

BRIMCO MFG. CO. 1820 Industrial Road Salt Lake City, Utah



Jenny

... the girl with the
magic touch that cuts
your maintenance costs!



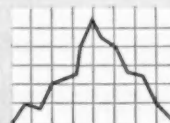
Cleans parts and motors



Simplifies preventive
maintenance



Cuts down-time



Reduces operating costs

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can re
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greas
The
steam
mode
fit yo

HO
Hyp

COMME

THE NEW "750" HYPRESSURE JENNY AT \$495

Pays for itself in LESS than 2 months

- Automatic Ignition
- Instant Steaming
- Delivers 75 Gallons per Hour at Any Working Pressure
- Fully Guaranteed

SERIES "750"
Jenny
STEAM CLEANER



The man-hours Jenny saves on routine maintenance jobs can repay its cost in less than two months. For example, a truck motor and chassis that normally requires over 2½ hours to clean by ordinary methods, can be stripped of grease and grime in less than 30 minutes!

The "750" Jenny is the most powerful, dependable steam cleaner in the low-priced field. There is a Jenny model designed to do every cleaning job . . . priced to fit your budget. Write today for complete information.



HOMESTEAD VALVE MANUFACTURING COMPANY
Hypressure Jenny Division • Coraopolis, Pennsylvania

Please send me additional information on the Model "750" Hypressure Jenny Steam Cleaner.

I am interested in time payments ☐

Name _____

Street _____

City _____ Zone _____

State _____

In stop-and-go driving...near-constant Champion solves problem of

New auxiliary-gap type Champion Spark Plugs keep engines firing smoothly far longer than ordinary plugs . . . sharply cut trouble and expense of replacing or cleaning fouled plugs. Here's how these new Champions work.

When gasoline engines run for long periods at low speeds, spark plugs often load up with carbon and oil deposits.

Under these conditions, spark plugs cannot get hot enough to burn off these deposits . . . voltage leaks to ground . . . and spark plug misfire occurs.

Use of a "hotter" spark plug may help burn away deposits when idling is not too prolonged. But in those operations where deposits form fast — Champion's new auxiliary-gap type plugs are needed.

Auxiliary Gap Makes the Difference

These new Champions have an internal auxiliary gap near the terminal. The auxiliary gap provides greatly increased protection against fouling by isolating ignition system output from the plug's firing end. Without this auxiliary gap, fouling deposits may bleed away voltage as soon as it is built up in the coil. As a result, a spark cannot be formed at the electrodes. With the auxiliary gap, however, voltage is allowed to first build up sufficiently at the spark plug *terminal*. Thus — for normal firing — adequate voltage is suddenly delivered at the electrode gap.

Real Benefit to Operators

These new Champions have proved a real benefit to operators, such as yourself, who may



The Hixon-Peterson Lumber Co. of Toledo, Ohio, reported that this delivery truck previously fouled plugs "every week." Auxiliary-gap Champions were installed and went 4 months before cleaning was needed.

be plagued by constant plug fouling. They greatly reduce the trouble and expense of having to pull and clean — or replace — spark plugs frequently. And they can keep your equipment in service and earning money during those periods when it used to be tied up for ignition work.

And yet these new Champions cost no more than regular plugs!

Your Champion supplier or representative can recommend the particular auxiliary-gap Champions that fit your equipment. Call him now and start saving on operating costs.

CHAMPION SPARK PLUG

COMMERCIAL CAR JOURNAL, December, 1957

idling...or low r.p.m. operation excessive spark plug fouling!



Arrows point to auxiliary gap that allows voltage to build up to a sparking intensity *before* it reaches the electrodes. In regular plugs, carbon deposits often drain away voltage as fast as it builds up in the coil. This condition, known as fouling, is the prime cause of misfiring in engines that seldom operate at full power.



This unit, owned by Migay Trucking, Mt. Vernon, N.Y., formerly fouled plugs in two weeks. Champion auxiliary-gap plugs have gone over 8,500 miles, with one cleaning at 5,000 miles, and are still in service.

The Cannan Dry Cleaners of Toledo reported that this delivery truck had fouled plugs at 2,500 miles. Auxiliary-gap Champions were installed and are still in service at 7,800 miles with one cleaning.



The National Auto Renting Co. of New York City encountered fouling every week or two with ordinary plugs. Auxiliary-gap Champions solved their problem, are still in service after four months without cleaning.



Always choose 5-rib

CHAMPION

SPARK PLUGS



COMPANY • TOLEDO 1, OHIO

COMMERCIAL CAR JOURNAL, December, 1957

155

Should Users . . .

Continued from Page 151

lation and new communities. Rural free delivery employs 32,300 letter carriers to serve 51 million rural residents. Besides delivering the mail, these carriers perform other postal services directly from their motor vehicles.

And, an increasingly large percentage of intercity mail is being handled by highway. In 24,000 cities and towns, all movement of mail is made by truck. For this regular delivery, 22,000 trucks are operated by the Post Office and an additional 11,000 motor vehicles are used by independent operators under contract to the government.

Pursuant to its power to promote the general welfare, the federal government has undertaken many other services.

In 1951, 24 projects operated by the Atomic Energy Commission were entirely or heavily dependent on highway transportation. In-

cluded in this number, which has since grown, were both uranium deposits and processing mills. Forest Service operations entail the use of 7301 motor vehicles of various types. Government use of highways extends also to the 26,531 United States Public Health Nurses.

All of these foregoing benefits accrue to the general public.



"We'll try to get to them defrosters next trip!"

Previous studies of highway cost allocation were made at a time when federal dependency on motor transportation was not comparable to the present. Even then, it was acknowledged that federal use of highways involved in government operations was heavy enough in itself to necessitate extension and improvement of roads without the invention of motor vehicles. For this reason, a proper share of highway costs could be justifiably allocated to the federal government.

The current Highway Cost Allocation Study, directed by Section 210 of the 1956 Federal Aid Act, offers the opportunity for an equitable assessment of the federal government's responsibility for the general public benefits from highways. The discharge of these federal obligations is the responsibility of all citizens and not of motor vehicle owners alone. Hence, they should be paid for from general funds and not special motor vehicle taxes.

END

Please Resume Reading Page 85

KIM
Hotstart

**electric
pre-heater**

for Diesel and Gasoline Engines

KIM HOTSTART pre-heaters circulate hot water through engines when they are not in use; protect them against bitter winter weather; keeps engines responsive to the touch of the starter. Lightweight; low cost; high in savings. Thousands in use.

- QUICK, EASY STARTS
- SAVES WARM-UP TIME
- REDUCES ENGINE WEAR
- ELIMINATES NEED FOR HEATED TERMINALS



See your automotive dealer or write for literature

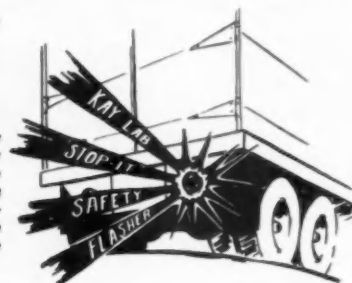
KIM HOTSTART MANUFACTURING COMPANY

West 917 Broadway, Spokane 1, Washington

"KAY LAB"

**FOR DEPENDABLE
QUALITY PRODUCTS**

KAY LAB is repeatedly the choice with every City, County and State government requiring flashing lights on emergency vehicles because only Kay Lab has the features specified.



"STOP-IT" SAFETY FLASHER

Finest flasher made. Makes lights flash on-and-off. Used for flashing warning signals and directional signals. Available in 4 types. Will flash any auto lamp to 64 candlepower, 5 amperes, standard ratings 6 or 12 Volts.

ALTERNATING FLASHER

HEAVY DUTY. Meets requirements of State Laws for alternating flashing signals. Up to 15 amperes, 6 or 12 Volts. No parts to wear out; requires no lubrication, no upkeep. Operates magnetically. Good for lights or horn signals.

Write for Folders, prices and name of nearest Jobber

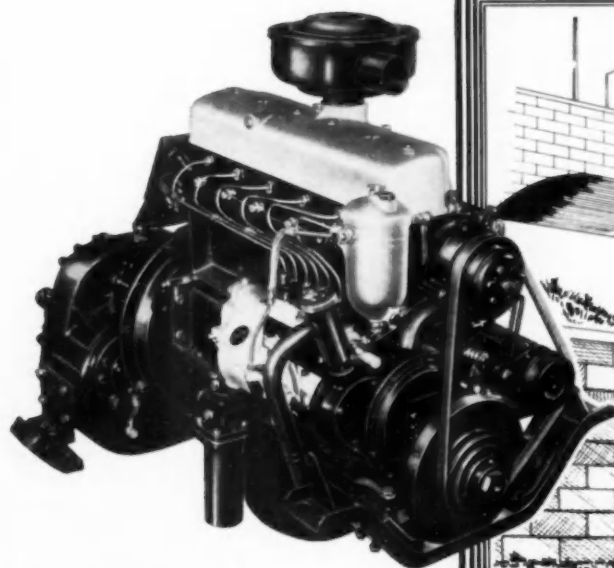
MACCHI & COMPANY

819 Valencia Street, San Francisco 10, Calif.

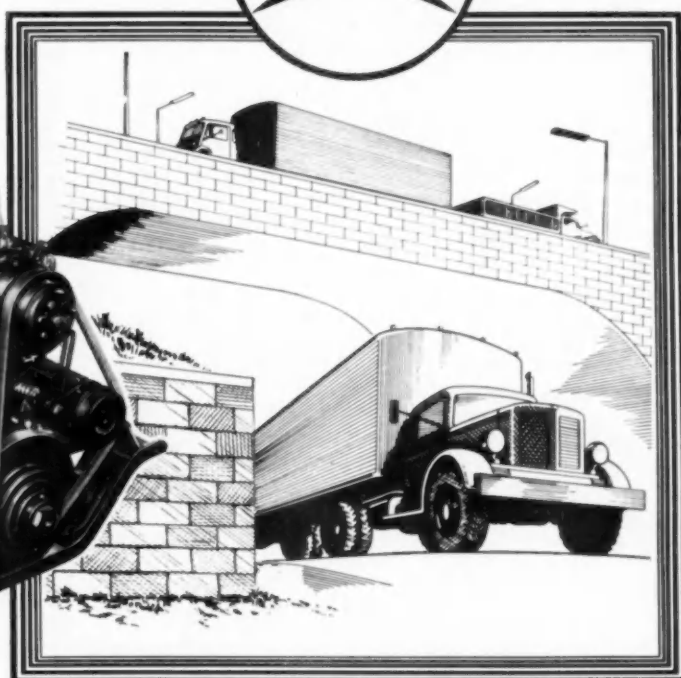
MERCEDES-BENZ DIESEL ENGINES

Now Available to Power Equipment in the TRUCKING INDUSTRY

Having a dependable source of power at the tip of his toe is of vital importance to the man behind the wheel. The effortless performance of the Mercedes-Benz diesel provides this power! Important too are quiet operation, smokeless combustion and unusually low maintenance—all features for which Mercedes-Benz is world famous.



Other Mercedes-Benz diesels available in 12 and 20 cylinders, Turbo and Supercharged, up to 3000 h.p.



All Mercedes-Benz diesel engines are 4-stroke and work on the time-proven, pre-chamber combustion process, assuring greatest possible quietness and smokeless combustion even under changing loads and different fuel qualities . . . Mercedes-Benz diesels are liquid cooled and equipped with an automatic

control guaranteeing complete operating safety, even under extreme climatic conditions . . . Other plus features include their easy handling, simple maintenance, economical fuel consumption and the small space required for installation . . . Unusually long life is a proven fact with Mercedes-Benz!

Several attractive territories
are available
to qualified distributors

UTICA-BEND DIVISION

CURTISS-WRIGHT

CORPORATION • UTICA, MICHIGAN

Two extra reasons for always

spe

Monroeville, New Lisbon, Seminole. Know where they are? * You might think these unlikely places for Bendix-Westinghouse distributors to be. But you'll find them there. And in hundreds of other cities and towns in all parts of the United States and Canada.

The point is that anywhere your units go they're

*In Ohio, Wisconsin and Oklahoma respectively

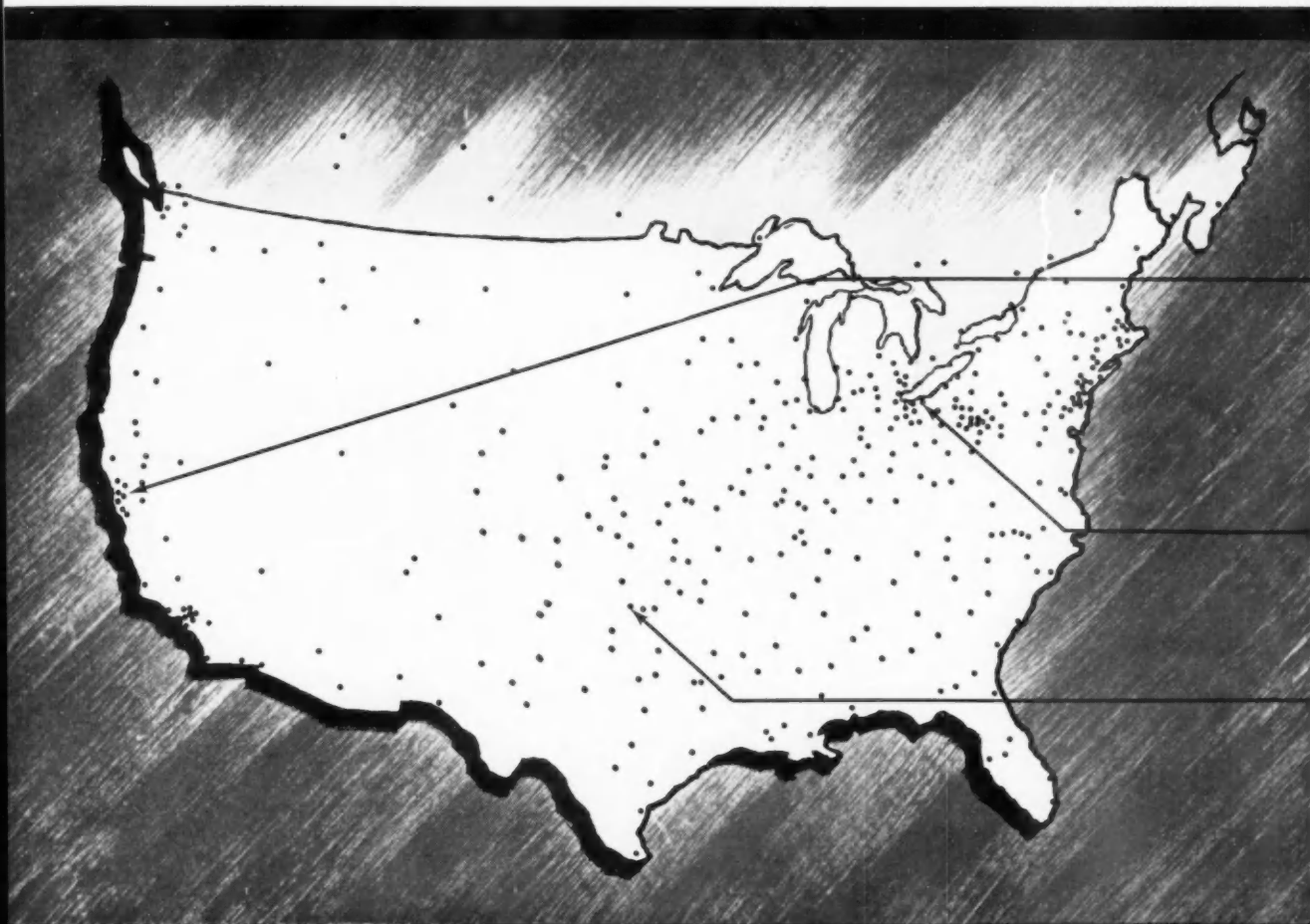
never far from a Bendix-Westinghouse distributor with trained air brake equipment experts and a complete stock of replacement units and service parts to handle any maintenance or repairs you may need.

This is an extra advantage you get *only* when you specify Bendix-Westinghouse Air Brakes.

If you v
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better a

If yo
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Brakes

first in sales and service



General
Factory



Look for this illuminated sign . . .

Or check the classified pages in your phone book



s specifying **BENDIX-WESTINGHOUSE**

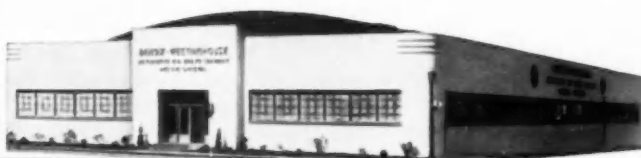
If you were to check the list over the years, you'd find Bendix-Westinghouse has shown the way consistently in the developments that have meant constantly better and better air brakes.

If you could check operating costs per mile across the country, you'd find Bendix-Westinghouse Air Brakes way ahead in providing fleet operators and

truck owners with better stops at lower cost for a longer time.

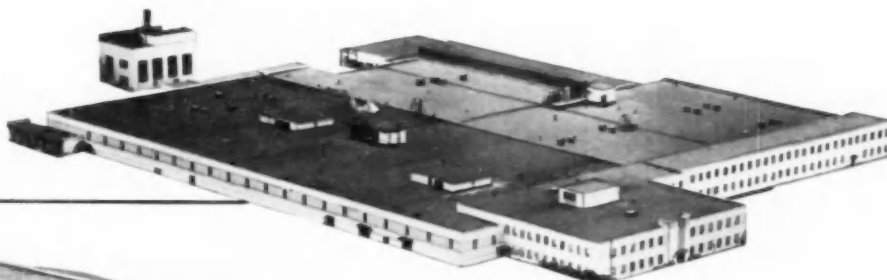
These facts are born of Bendix-Westinghouse research and manufacturing talents—and are two of the biggest reasons why *more trucks travel more miles with Bendix-Westinghouse than with all other air brakes combined!*

first in research and manufacturing



Berkeley, Calif., branch

General Offices and
Factory—Elyria, Ohio



Oklahoma City, Okla., branch

Bendix-Westinghouse

AUTOMOTIVE AIR BRAKE COMPANY



AIR BRAKES

NEW

PRODUCTS

DESCRIBING RECENTLY ANNOUNCED PRODUCTS AND EQUIPMENT OF INTEREST TO MEN CONCERNED WITH TRUCK, BUS AND CONSTRUCTION FLEET MANAGEMENT

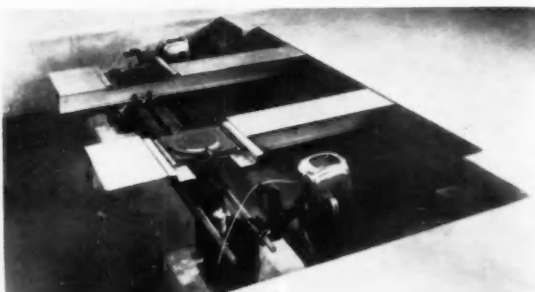
As a special service, complete address of each source is included so readers may save time—write directly for further information on products described



Generator-Regulator Test Bench

from Allen Electric & Equipment Co.
2101 N. Pitcher St., Kalamazoo, Mich.

is for use on both 6 and 12-volt auto and light truck generators. Model No. 20-14 is for use on generators with or without matching regulators. Other features include forced air cooling, illuminated meters, and simplified test lead hookup.



Pit-Type Wheel Aligner

from John Bean Division,
Food Machinery & Chemical Corp., Lansing, Mich.

is for use on trucks, buses, autos and even sports cars. It adapts from 48 to 90 in. tread widths. It may be used with portable equipment, mechanical or "Visualiner" heads. The heads may be dropped out of the way of the operator for easy access to the front of the car. They slide on roller bearing mountings. Runways are also mounted on roller bearings to make tread adjustment easy.



Engine Stand

from Manzel Division, Houdaille Industries, Inc.
315 Babcock St., Buffalo, N. Y.

is designed to hold the heavier, wider 1958 models with adaptability to even heavier and wider models in the future. The stand provides full 360° rotation and has a positive floor locking device. It is of tubular welded steel construction. An "outboard support" arm is optional. When car engines of the future—or combined axle-transmission adaptations—require a two-post stand, the support arm can be slipped into place.

Portable Engine Test Set

from Snap-On Tools Corp.
8028 28th Ave., Kenosha, Wis.

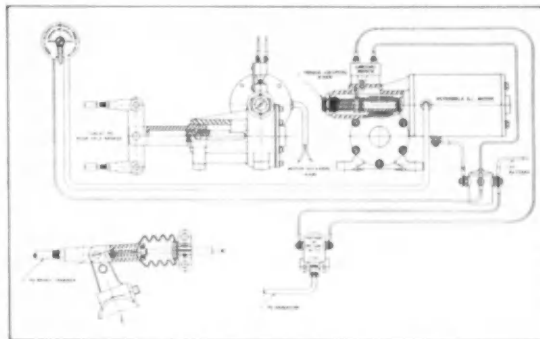
consists of a generator-regulator tester, tach-dwell meter, ignition analyzer, exhaust gas analyzer, two tune-up meter racks and a roll stand. The generator-regulator tester is for all autos and most trucks. It has a 15-volt range besides a 60-volt range for heavy duty ignition systems of more than 12 volts. The tach-dwell meter for use on 6, 12 and 24-volt systems does the jobs of a tachometer and a cam angle meter. It has color coded scales. Exhaust gas analyzer is for either gasoline or LP single-exhaust engines. Test stand is 31 in. high with four swivel rollers.



Bus Emergency Brake

from Robinson Engineering & Sales Co.
16550 Wyoming Ave., Detroit 21, Mich.

brings the coach to a gradual stop if air pressure fails. In an emergency, a low pressure switch starts an electric motor. It shortens a linkage to cables attached to rear slack adjusters. A dash control permits the driver to release the brakes. By using the control as a regular brake, he can drive the bus to a safe parking place. Brake can also be used as a parking brake. Once applied, shoes will remain in contact with drums until the electric motor is started and reversed. It is available as replacement for transit and intercity coaches as well as original equipment.



Portable Trailer Heater

from Stow Mfg. Co.
88 Shear St., Binghamton, N. Y.

can deliver 120,000 Btu's per hr at a rate of 950 cu ft of heated air per min, says the manufacturer. The Porto-Heat Model No. 120 operates on No. 1 and No. 2 fuel oil or kerosene and burns 0.85 gallon of fuel per hr. It has an automatic electric ignition and a fan driven by a 1/6-hp motor. It weighs approximately 80 lb and measures 40 in. long by 16 in. high. Safety features include an automatic fuel cut-off in case of power failure.

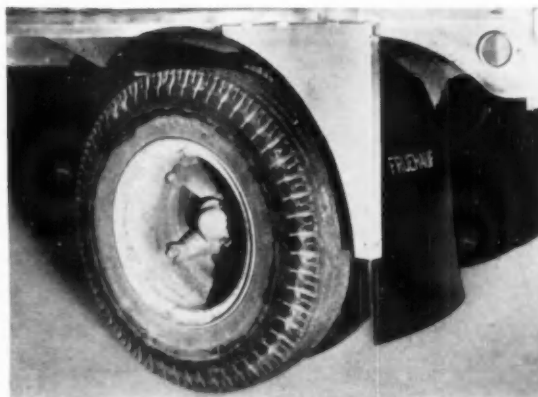


Contour Mud Flap Brackets

from Fruehauf Trailer Co.
1090 Harper Ave., Detroit 32, Mich.

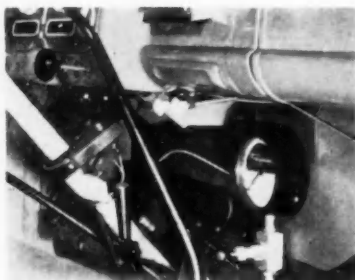
allow truck operators who use Illinois highways to comply with that state's mud flap laws and still use existing mud flap equipment. Use of the brackets has been approved by the State of Illinois Department of Public Safety and Division of Highways, Fruehauf says. The brackets are attached to the trailer or tractor either by welding or bolting them on.

(TURN TO NEXT PAGE, PLEASE)



New Product Descriptions

Continued from Page 161



Dump Truck Scale

from Aluminum Body Corp
P. O. Box 28
Montebello, Cal.

takes the guesswork out of dump truck loading, says the manufacturer. Called the "Freewayer," it takes about two hours to install in the cab. It weighs as the truck is loaded by means of the hydraulic pressure on the hoist.

Oil Tester

from The Miller Co.
Marblehead, Mass.

shows through on-the-spot experiment when it is time to change oil. Between 15 and 20 drops of oil are dropped from the dipstick into a test tube filled with chemicals, the test tube is shaken, and then compared with a chart to see if oil has been contaminated. It also shows when the oil filter should be changed, the manufacturer says.

Headlight Aimer

from John Bean Division
Food Machinery and Chemical Corp.
Lansing 4, Mich.

is designed to check and aim all sealed-beam lights on any make of truck or car. Aiming for both vertical and horizontal alignment can be done

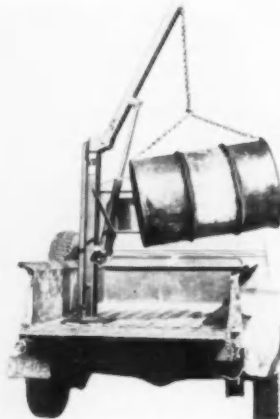


in less than one min. without removing the hood rings from the sealed beams. Offered in "Trulite Aimer" kit, the unit consists of a pair of styrene aimers with zinc compensating level; a pair of steel wall brackets; a service sign; and a sealed beam meter to show the condition of the lights.

Truck Crane

from Star Machine & Tool Co.
201 SE Sixth St.
Minneapolis, Minn.

will lift loads up to 1000 lb, says the manufacturer. Called the "Little Oscar," the hydro-lift unit weighs



approximately 17 lb. The mounting well mounts flush with the truck deck to allow full space loads when the crane is removed. The boom raises 88 in., drops to 23 in., and is 45 in. in length. Overall height is 49 in.

Plastic Lenses

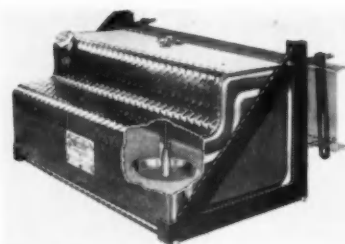
from Auto Lamp Mfg. Co.
2909 Indiana Ave.
Chicago 16, Ill.

are designed to replace most plastic lenses in popular demand. Marketed in the Pathfinder series, they are made to meet or exceed original manufacturer specifications, the manufacturer says.

Safety Fuel Tanks

from Prior Products, Ind.
4828 Racell St.
Dallas, Texas

include two new features. All Prior "L-Step" tanks now have a sump in



the bottom of the tank permitting full utilization of the entire fuel capacity of the tank. Monel filter tips have been adopted for this use. And to increase the strength of the tank, special dies are used to emboss an impact-relieving structural rib as an integral part of the full-flanged tank heads.

Corrosion Inhibitor

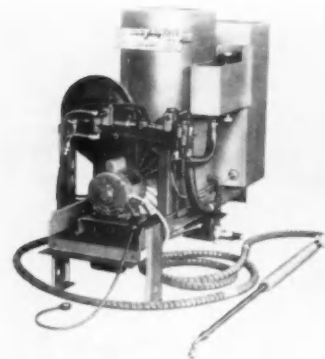
from Beacon Chemical Industries, Inc.
33 Richdale
Cambridge 40, Mass.

for use anywhere where water, glycerine, alcohol or glycol are used and where corrosion is a problem—in the water systems of trucks, tractors, road building machinery and fleets of automobiles. Triethylammonium Phosphate 802 is being marketed in 5, 30 and 55-gal drums as well as tank cars.

Steam Cleaner

from Homestead Valve Mfg. Co.
Coraopolis, Pa.

has automatic electric ignition, positive displacement pump with stainless steel disc check valves, automatic



protection for vapor hose against action of superheated steam; contamination-proof water system and built-in thermal overload protection for the motor, the manufacturer says. Capacity is 75 gal per hour at any pressure and has been titled the "Seven-Fifty" series "Hyppressure Jenny" steam cleaner.

(TURN TO PAGE 166, PLEASE)

For Plus-Traction and Plus-Safety, hundreds of Fleets rely on *Penetred* Steel Coils!

READ HOW ONE TRUCKER CUTS COSTS
AND INCREASES EFFICIENCY
WITH PENETRED . . .

HERE'S HOW THEY WORK



CONTINUOUS PENETRED THERMO DUCTOR
COILS MOULDED IN THE TREAD QUICKLY
FORM THOUSANDS OF STEEL GRIPPING
CLAWS

Penetred "PLUS-PROTECTION"
AVAILABLE IN RECAPS THROUGH
YOUR LOCAL SUPPLIER . . .

OR
IN NEW TIRES FROM GOODYEAR
TIRE & RUBBER COMPANY UNDER
THE NAME "STEEL GRIP"®

"STEELGRIP" IS A REGISTERED TRADE MARK
OF GOODYEAR TIRE & RUBBER CO.

STEFFKE FREIGHT COMPANY
BOX 748
WAUSAU, WISCONSIN

January 3, 1956

Penetred Corporation
104 West Arnold Street
Marshfield, Wisconsin

Attention: Robert Felker
Dear Sir:

I thought you might be interested in our experience with "Goodyear Steel Grip Tires" and "Penetred-Kury" recaps, both using Penetred wire.

We find great improvement in traction over standard highway treads. With this improved traction on ice, we find these tires eliminate many service calls to get trucks that are stuck on hills or alleys and at loading docks, and also eliminates the need for drivers to look for a source of sand or ashes when stuck. Many of our drivers ask us to put these tires on their tractors. To obtain greater cornering force, we use "Goodyear Steel Grip" on the front wheels of six-wheel tractors and short wheel base cab-overs to prevent the front ends from sliding out on turns, particularly on wet asphalt and ice. This has been very successful.

Fewer repairs are needed to the carcass of these tires when recapping. The wire seems to stop the sharp stones that cut into the cords and damage the carcass. Mileage wise, these tires are equal to, or better than the standard tire. From the additional traction, we anticipate a considerable, intangible saving in the form of improved service, labor savings and accidents prevented.

Yours very truly,

STEFFKE FREIGHT COMPANY
William Ellis

WG:hh

"I'm Penny"

c P.C. '57

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. . . ORDER FREE LOAN FILM TODAY!

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CORPORATION
MARSHFIELD, WISCONSIN

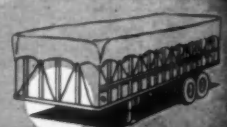
PENETRED CORPORATION MARSHFIELD, WISCONSIN

YES! I'd like to see actual films of University conducted tests of Penetred Steel Coil Truck tires under brutal weather conditions. Please send a loan print of your color-sound movie which we will return after viewing.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____



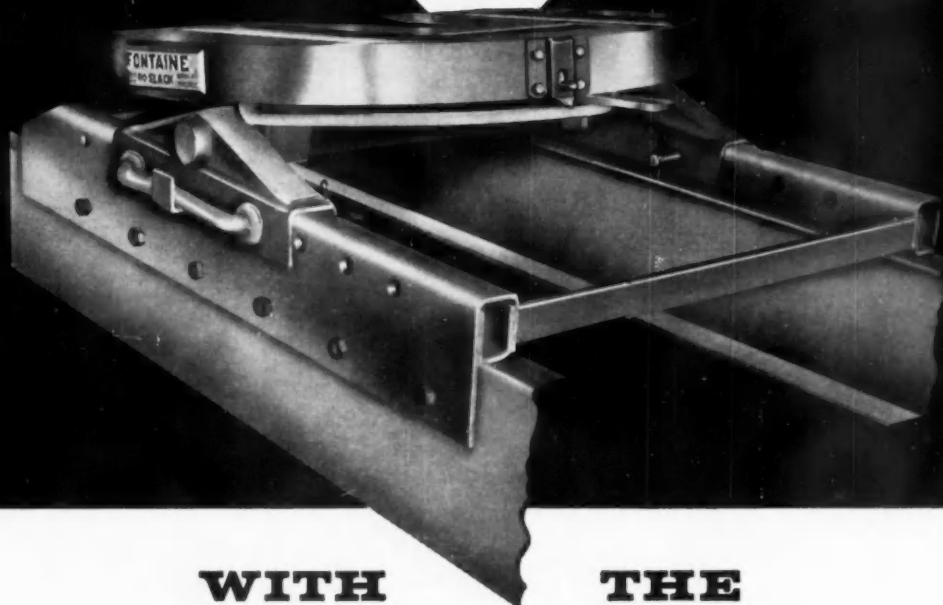
FASTER TRAILER INTERCHANGE



better weight



distribution



WITH THE Fontaine Sliding Wheel

The Fontaine Sliding "No-Slack" 5th Wheel is a movable assembly designed to adjust weight distribution from or to the steering or drive axles, and to accommodate various lengths of trailers and kingpin settings. Adjustment time is held to a minimum by the insertion of solid steel pins, two to each side, to lock the adjustable wheel mount in any desired position. The Standard Slide has an adjustment of 20". Additional slide up to 6' is available to take advantage of maximum length laws in each state.

The heavy-gauge steel slide rails are bolted to the frame and are excellent frame reinforcing members. The big, 36" diameter wheel is fabricated of heavy-gauge steel plate, guaranteed not to crack or break under any trailer load.

Completely installed, this rugged Standard Slide 5th Wheel weighs only 410 pounds. This unit is made to fit any truck frame and is completely assembled when shipped.

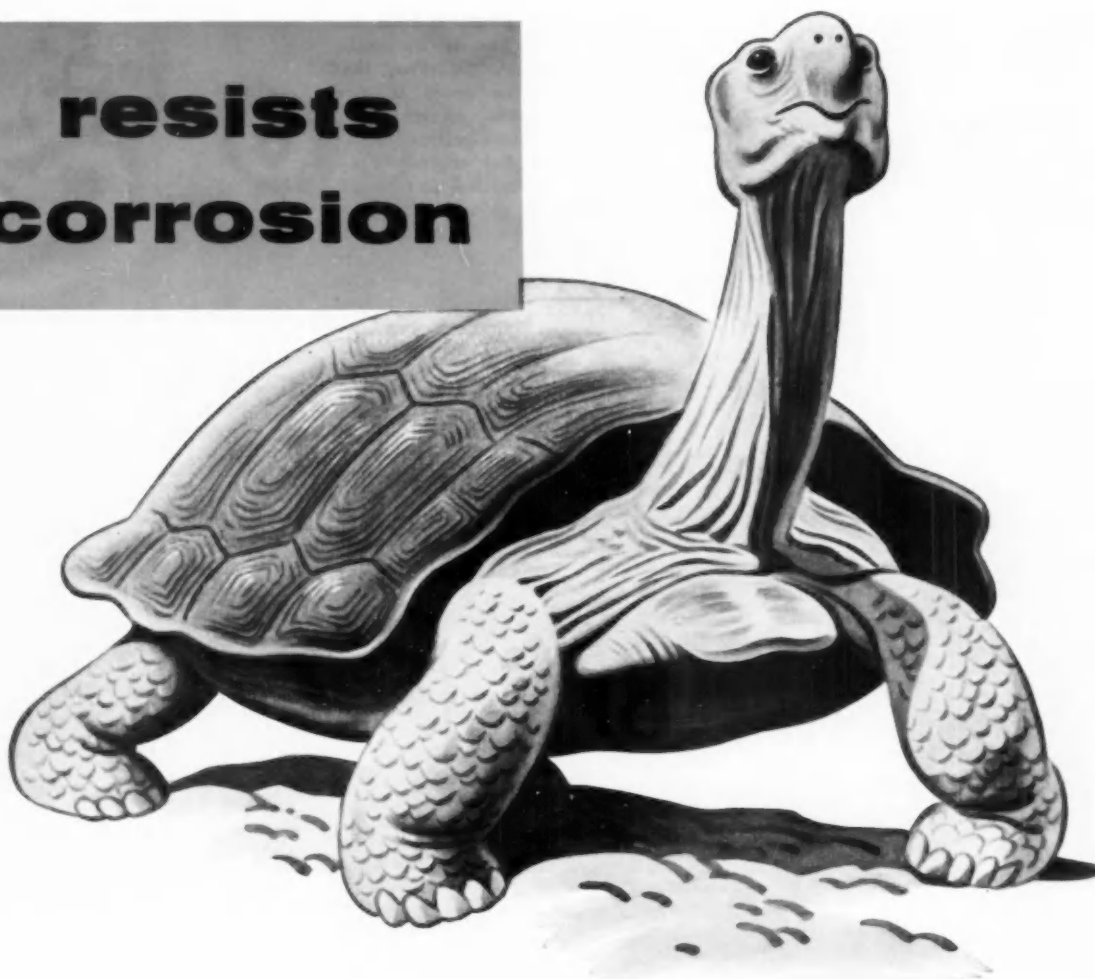
Complete, detailed information on the Fontaine "No-Slack" 5th Wheel line is available free. Write for your copy. There is no obligation.

Fontaine
NO-SLACK[®]
5th WHEELS

are sold nationally through truck dealers

Fontaine Truck Equipment Co., Inc.
1232 North 37th Place
Birmingham 1, Alabama

**resists
corrosion**



Sea Turtles wear an armored shell that resists both enemies and elements. And Parish Pressed Steel Company, a division of Dana Corporation and a leading manufacturer of automotive chassis and frames, uses A. W. Dynalloy steel for much the same reason . . . resists corrosion!

There are other reasons, of course. A.W. Dynalloy is

- . . . stronger per unit of weight
- . . . easy to weld
- . . . easy to form

As with Parish Pressed Steel, A.W. Dynalloy can help you get more value per dollar spent for your product. Send for our A. W. Dynalloy booklet which gives complete information. Write Marketing Division, Dept. DY-S91.



A.W. DYNALLOY

ALAN WOOD STEEL COMPANY

steelmasters for more than a century and a quarter CONSHOHOCKEN, PA.

DISTRICT OFFICES AND REPRESENTATIVES: Philadelphia • New York • Los Angeles • Atlanta • Boston • Buffalo • Cincinnati • Cleveland • Detroit • Houston • Pittsburgh • Richmond • St. Paul • San Francisco • Seattle • Montreal & Toronto, Canada—A.C. Leslie & Co., Limited

COMMERCIAL CAR JOURNAL, December, 1957

165

New Products

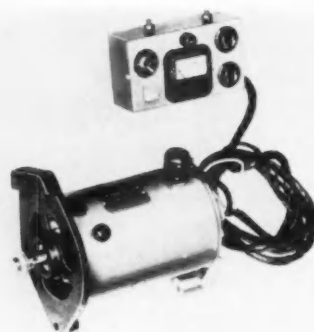
Continued from Page 162

AC-DC Generator

*from Kurland Combinator
Denver 3, Colo.*

give AC or DC electrical power. Electricity for heating and cooling units, two-way radios, mobile telephones, power tools or lights is delivered

through a dash panel. Called the "Combinator," it has an automatic engine speed control, "Dac-Vac," that changes the engine speed from a normal idle to the correct speed needed to operate an electrical tool or appliance. With the engine idling, the Combinator remains in the DC range. When the switch on the tool is turned on, the Dac-Vac changes the Combinator from DC to AC and increases the speed of the engine. By mounting the Combinator "piggy-back" on original generator, the two



can provide 60 to 70 amps DC or 1200 watts, 110 volts, 60 cycle continuous AC current.

Wide Sheet Aluminum

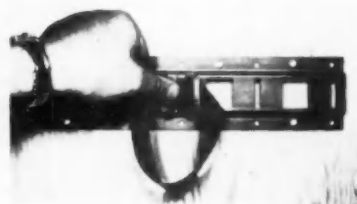
*from Aluminum Co. of America
1501 Alcoa Bldg.
Pittsburgh 19, Pa.*

can be used for one-piece trailer roofs. The sheeting is seamless and comes in 90 to 93 in. widths and light gauges. It may also be used for one-piece sub-flooring for reefers, Alcoa says. The sheeting is available in coils or flat.

Cargo Tie-Downs

*from General Logistics Division
Aeroquip Corp.
Pasadena, Cal.*

include steel tracks for strap assemblies and the strap locking device, the "Tracklock." The track, in 8-ft.



lengths, fits inside the trailer walls. The lock is connected to the track in about a second. Aeroquip says. The units can be installed to encircle cargo, strap it against a wall, or hold it to the floor.

Battery Corrosion Paste

*from Pep Mfg. Co., Inc.
33 W. 42nd St.
New York, N. Y.*

dissolves old corrosion and prevents more from forming as long as the battery stays in the vehicle, says the manufacturer. "Korode Kure" is being marketed in gallons for fleet use.

(TURN TO PAGE 170, PLEASE)

New Series of
HEAVY DUTY
Modulated Fan Drives

for

TRUCKS · BUSES ·
EARTH MOVING EQUIPMENT ·
STATIONARY INSTALLATIONS ·

FAN SPEED VARIES WITH
TEMPERATURE REQUIREMENTS

*Self Contained Control Within
Water Pump or Bracket Mounting
Eliminates Outside Power Source
Saves Horsepower and fuel*

WRITE FOR SCHWITZER BULLETIN D-112

REQUEST "SCHWITZER FANS AND FAN DRIVES" THROUGH YOUR EQUIPMENT DEALER OR DISTRIBUTOR



WEAVER HEAVY DUTY LIFTS

handle all wheelbase lengths
without loss of lifting capacity

You'll find that Weaver Lifts provide the answer for every weight and wheelbase requirement of every vehicle in your fleet. These lifts raise vehicles by the axles, thus giving mechanics free, unobstructed access to every under-chassis point. There are no rails in the way. Such working efficiency speeds shop production from 25% to 100%.

The Weaver Twin Post Lift and the Weaver Triple Post Lift (shown above in the same shop) are the *only* automotive type lifts that can handle various wheelbase lengths without loss of lifting capacity.

Heavy Duty Twin Post Lifts are regularly furnished with a wheelbase capacity of 102" mini-

mum and 204" maximum unless otherwise specified. Wheelbase extensions are available to take from 36" minimum up to 306" maximum — or greater, on special order.

MODEL EC-105 TWIN POST LIFT is air-oil operated, and has a total capacity of 24,000 lbs.

MODEL EC-106 TWIN POST LIFT is electric operated, and has a total capacity of 36,000 lbs.

MODEL EC-106-3 TRIPLE POST LIFT is electric-oil operated, and has a total lifting capacity of 54,000 lbs.

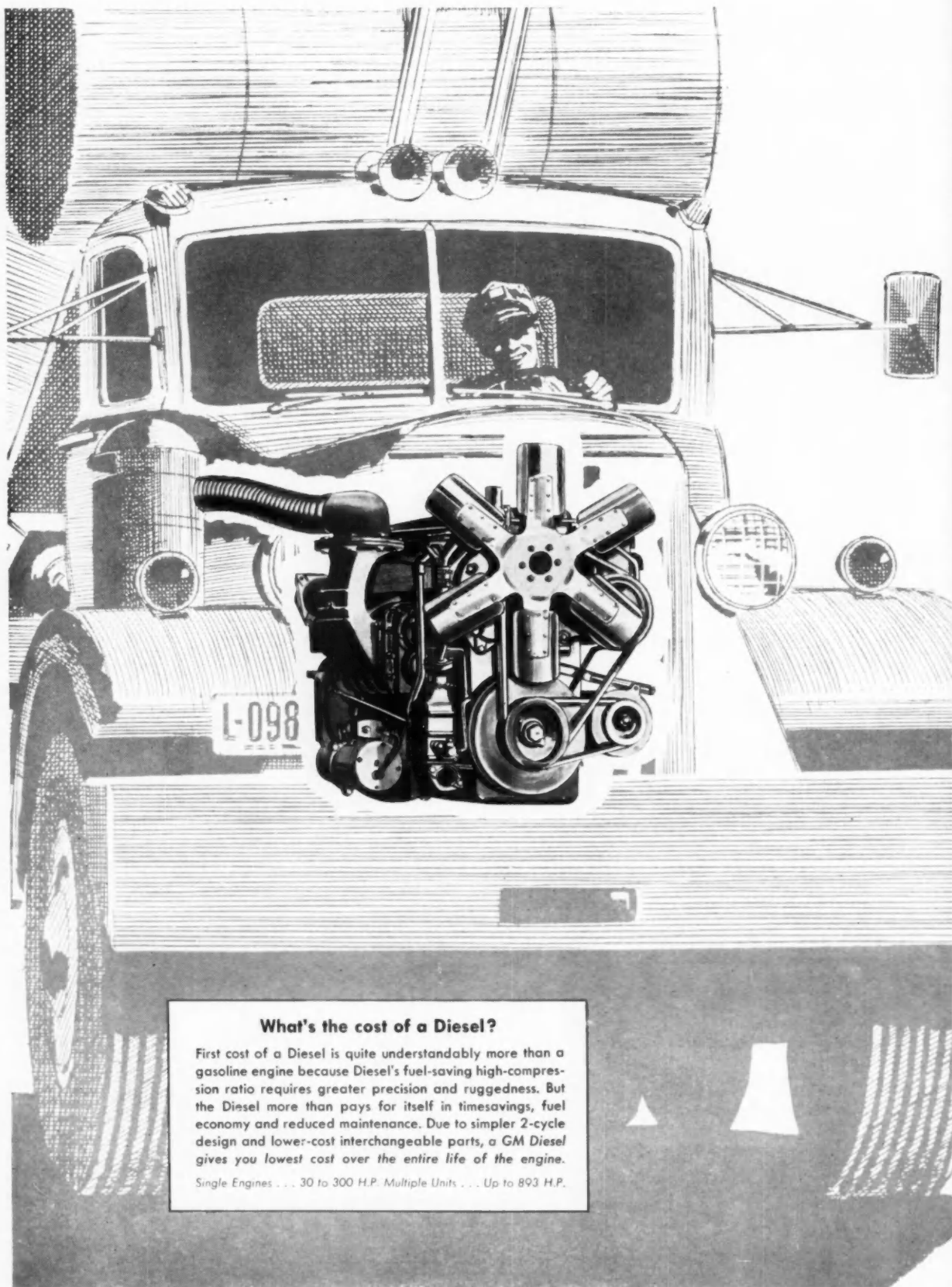
For further details, see your Weaver jobber, or write us for Bulletin CCJ-457.

WEAVER

WEAVER MANUFACTURING COMPANY, SPRINGFIELD, ILL., U. S. A.

SERVICE SHOP EQUIPMENT

Complete line includes: Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on, Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Bumper Lift . . . Car Washers . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . and Air Compressors.



What's the cost of a Diesel?

First cost of a Diesel is quite understandably more than a gasoline engine because Diesel's fuel-saving high-compression ratio requires greater precision and ruggedness. But the Diesel more than pays for itself in timesavings, fuel economy and reduced maintenance. Due to simpler 2-cycle design and lower-cost interchangeable parts, a GM Diesel gives you lowest cost over the entire life of the engine.

Single Engines . . . 30 to 300 H.P. Multiple Units . . . Up to 893 H.P.

A Gen
grades
again

That's
tion of
cranks
"Jimm
running

In add
foot-p
torque

Equal
most e
injecte
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compl
GM I
plus t
with j

This new "Jimmy" Diesel is the pullingest engine ever hitched to a load

*New GM "71E" Diesel is available for any make truck
26,000 GVW and up—produces higher torque at lower speed*

A General Motors 2-cycle Diesel not only moves loads up grades faster, but even outperforms engines more than half again its size.

That's because *every* cylinder delivers power *every* revolution of the crankshaft—twice as many power strokes per crankshaft revolution as 4-cycle Diesels. This makes a "Jimmy" Diesel more powerful for its size, smoother running, faster accelerating.

In addition, the new "6-71E"* engine develops a full 577 foot-pounds of torque at 1200 rpm—gives you higher torque at lower speed for greater pulling ability.

More Work—Less Down-Time

Equally important, the "Jimmy" Diesel has the simplest, most efficient fuel injection of any Diesel. Patented unit injectors feed fuel into cylinders under high pressure in exactly metered, precisely timed charges. They eliminate complex fuel pumps and high pressure lines—making GM Diesels far easier and cheaper to maintain. This—plus the new "E" engine's highly improved "breathing" with four exhaust valves per cylinder and bigger air inlet

ports—assures more complete combustion, faster response to throttle, improved fuel economy and cleaner exhaust.

Leading highway haulers who have used this new "71E" engine report outstanding fuel mileage and reduced upkeep compared with other Diesels they operate and major savings over gasoline engines they have replaced.

See your GM Diesel distributor about repowering your present equipment. When you're in the market for new trucks, ask for this great new GM "71E" Diesel. And if the truck you choose isn't immediately available with a "Jimmy," turn your truck over to the GM Diesel distributor for a "71" installation. Write for free copy of six-page illustrated brochure on these new GM Diesel Truck Models.

*6-71E—210 h.p.; 4-71E—140 h.p. New Turbopower models deliver higher horsepower: 6-71T—236 h.p.; 4-71T—171 h.p.

DETROIT DIESEL

Engine Division of General Motors, Detroit 28, Michigan

In Canada: GENERAL MOTORS DIESEL LIMITED, London, Ontario

Regional Offices:

New York, Atlanta, Detroit, Chicago, Dallas, San Francisco

**Now—more than ever—it pays to
standardize on GM Diesels**



Parts and Service Worldwide

**—available in 1485 applications of
power equipment built by more than
175 manufacturers**

New Products

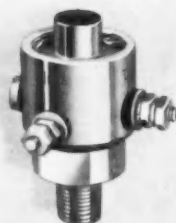
Continued from Page 166

Trailer Emergency Switch

from Robinson Engineering & Sales Co.
16550 Wyoming Ave.
Detroit 21, Mich.

can have two functions. Normally it is a stop light switch. But when it is installed in a bypass in the air

lines, it can be used to warn the driver that he has not opened the air lines to the trailer. First contact auto-

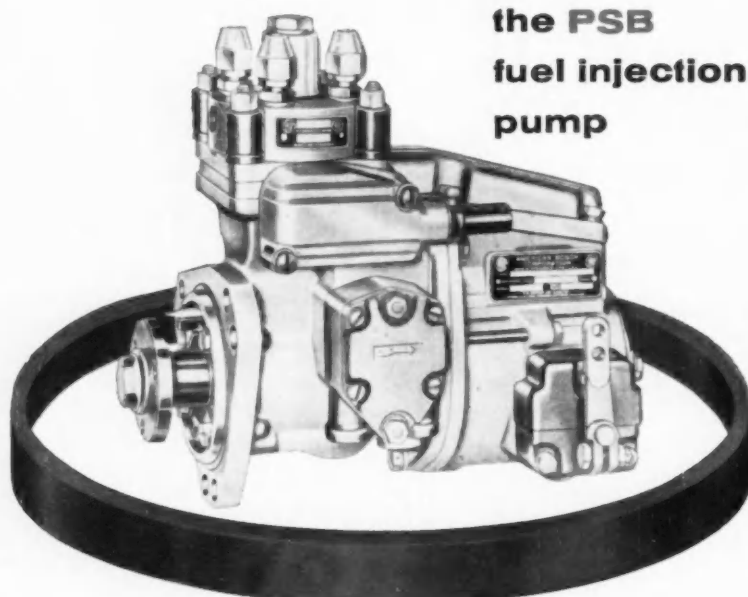


matically cuts out the emergency stop light circuit when air pressure drops below 10 psi. Secondary contact is made when the air pressure drops to around 70 psi. It is of self lubricating piston type design. It has no diaphragms or cylinder cups.

Modulated Fan Drive

from Schwitzer Corp.
1125 Massachusetts Ave.
Indianapolis 7, Ind.

varies the fan speed with cooling requirements. It is offered in three classes for trucks, buses, earth mov-



the PSB
fuel injection
pump

TOP VALUE

...from outstanding performance—proven by the unexcelled service records of the more than 140,000 American Bosch PSB pumps now in use.

...from outstanding design—featuring simple construction with fewer parts... positive governor control... precise fuel metering and distribution... replaceable hydraulic head for fast field servicing.

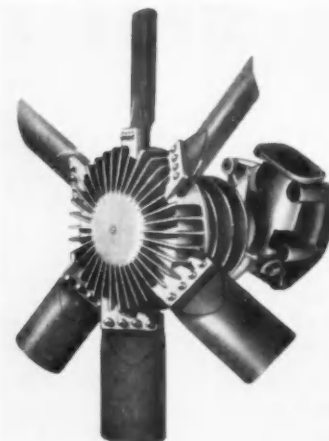
...from unmatched operating economy—efficient design and careful manufacture assure top diesel engine performance... long, trouble-free operation with minimum maintenance and repair.

...from low-cost repair service—by factory-trained experts at Authorized American Bosch Service Stations... nearly 200 in North America, Hawaii, and Puerto Rico... all equipped with special tools and test equipment, and stocked with genuine American Bosch replacement parts.

4847



AMERICAN BOSCH
DIVISION
AMERICAN BOSCH ARMA
CORPORATION
SPRINGFIELD 7, MASS.



ing equipment and stationary engines. The speed control is contained in the water pump or bracket mounting. Schwitzer claims it saves horsepower and reduces fan noise.

Portable Charger

from Exide Automotive Division
P.O. Box 6266
Cleveland 1, Ohio

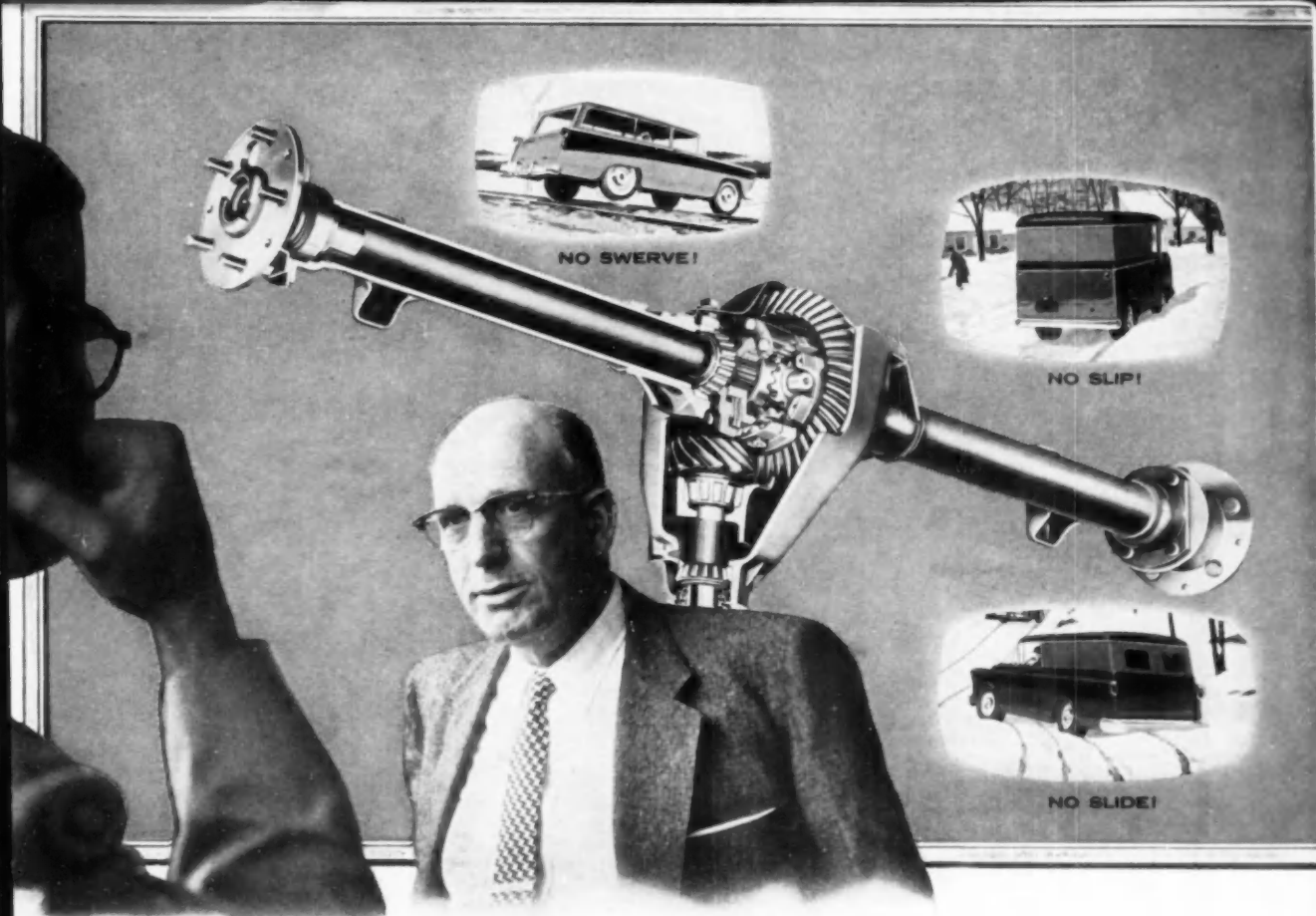
is called the "Minute Man" by its manufacturers. The Model No. EX-353B provides charging rates of 100 amps at 6 volts, 50 amps at 12 volts. The case is only about the size of a storage battery and weighs 37 lb. According to the manufacturer, the compactness was accomplished through the use of hermetically-sealed silicon rectifiers.

Penetrating Oil

from Krylon, Inc.
18 West Airy St.
Norristown, Pa.

doubles as both a penetrating oil and solvent to loosen metal parts that have rusted together. The push-button spray is marketed in 6 and 16-oz containers.

(TURN TO PAGE 172, PLEASE)



"Every commercial operator can profit from the 3-way benefits of **POWR-LOK!**"

Earl M. Douglas, Vice President-Engineering, Dana Corporation

The Spicer POWR-LOK Differential can help keep your passenger cars and light trucks running more continuously and profitably, with less "hung up" time; can help cut tire and maintenance costs; and can help reduce accidents.

POWR-LOK is a revolutionary differential that permits the rear axle to automatically deliver the greatest driving force to the rear wheel that has the best gripping traction.

POWR-LOK ends slipping on ice or wet hills and pavements if either wheel can catch hold.

POWR-LOK ends slipping, sliding and getting stuck in mud or sand if either rear wheel can catch hold.

POWR-LOK ends dangerous swerve and unbalance resulting from "wild wheel" hop and spin on rough, bumpy roads.

Your new light trucks and passenger cars will be *safer*, more dependable under *all* driving conditions, if they are equipped with Spicer Thornton POWR-LOK Differentials. POWR-LOK is available in many 1958 passenger car and light truck models.

DANA CORPORATION • Toledo 1, Ohio

DANA PRODUCTS Serve Many Fields

AUTOMOTIVE: Transmissions, Universal Joints, Propeller Shafts, Axles, Powr-Lok Differentials, Torque Converters, Gear Boxes, Power Take-Offs, Power Take-Off Joints, Clutches, Frames, Forgings, Stampings.

INDUSTRIAL VEHICLES AND EQUIPMENT: Transmissions, Universal Joints, Propeller Shafts, Axles, Gear Boxes, Clutches, Forgings, Stampings.

AVIATION: Universal Joints, Propeller Shafts, Axles, Gears, Forgings, Stampings.

RAILROAD: Transmissions, Universal Joints, Propeller Shafts, Generator Drives, Rail Car Drives, Pressed Steel Parts, Traction Motor Drives, Forgings, Stampings.

AGRICULTURE: Universal Joints, Propeller Shafts, Axles, Power Take-Offs, Power Take-Off Joints, Clutches, Forgings, Stampings.

MARINE: Universal Joints, Propeller Shafts, Gear Boxes, Forgings, Stampings.

Many of these products manufactured in Canada by Hayes Steel Products Ltd., Merritton, Ontario



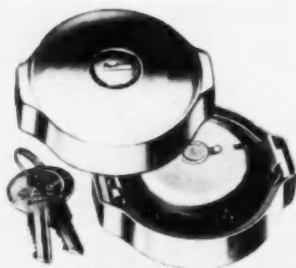
New Products

Continued from Page 170

Lock Gas Cap

from Stant Mfg. Co.
Connersville, Ind.

is offered in two models to fit most fleet passenger cars. Models No. G-54 and G-57 "Dual-lok" are merely pressed on to lock. But they can only



be removed with a key. The caps are of stainless steel construction.

Arc Welder

from Hobart Brothers Co.
Troy, Ohio

is designed for operation on single phase, 60 cycles, 230 volts input. Output of the welder at 30 volts is 295 amp on 20 per cent duty cycle; 250 amp on 30 per cent duty cycle and 200 amp on 50 per cent duty cycle. The transformer is the "diverter path" type with magnetic control.

Air Jack

from Bear Mfg. Co.
Rock Island, Ill.

is designed for alignment and frame straightening. Collapsed, Model No. AJ-2 is 14 in. high. It has a 5½ in.



ram stroke. A pair has a combined top lifting capacity of 6000 lb at 175 lb air pressure. They are foot operated. The 22-lb jacks are built of aluminum alloy.

Condensate Valve

from DeWitt Laboratories
4024 Liberty Ave.
Pittsburgh 24, Pa.

removes moisture from brake systems automatically, says the manufacturer. It is operated by exhaust air. It is simply screwed into the air tank. It has a self-contained heating unit to prevent any freezing of water in the mechanism.

Brake Fluid

from Chrysler Corp.
Detroit 31, Mich.

is for use in all brake systems. It has a minimum boiling point of 390° F.—nearly 100° higher than the current specifications established by SAE for "heavy-duty" brake fluid. Another feature Chrysler Corp. claims for the fluid is that there is no damaging effect on rubber parts in the braking system.

(TURN TO PAGE 174, PLEASE)

**NEVER SO MUCH
BRAKE DRUM
LATHE**

**Fleet Shops—
it's NEW
and for you!**

**FOR SO LITTLE
MONEY!**

**NEW—
NO. 304**

Designed for Precision
Machining Brake Drums
on Passenger cars and
Trucks UP TO 10 TONS!

Sliding and Revolving
solid Spindle—3" Diam-
eter... cuts set-up time.

12" Spindle travel gives
easier access to drum
interior.

Multiple speeds and in-
dependent feeds. 1 HP
Motor.

Turns AND Wet Grinds,
SIMULTANEOUSLY, with
Vapo-Jet WET Grinder
attachment.

Put this great, new, medium-priced Lathe to work in your Service Shop and you'll really see some fast, economical Brake Drum reconditioning! It means more road time, with less vehicle down-time for brake maintenance. Designed to handle brake drums on Fleet Cars and Trucks UP TO 10 TONS, the new No. 304 cuts shop labor time. The Sliding and Revolving Spindle slashes set-up time in half. Van Norman's Precision Machining gives your Drums that mirror-like finish that means maximum life to linings plus good brakes.

An easy, "Pay-as-You-Depreciate Plan" for Fleets gives you a good break too! Ask for Details. Van Norman Automotive Equipment Company, Springfield 7, Mass. A Division of Van Norman Industries, Inc.

VAN NORMAN

PRECISION
VAN NORMAN
MACHINING

IN MODERN, EFFICIENT SHOPS—EVERYWHERE!



**The only trailer that
will haul more and
last longer than
a Great Dane...**

*Merry Christmas
and a Happy New Year!*

GREAT DANE TRAILERS

SAVANNAH, GEORGIA



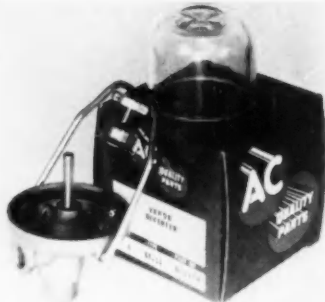
New Products

Continued from Page 172

Fuel Vapor Diverter

from AC Spark Plug Division
Flint, Mich.

prevents vapor lock in gasoline buses and trucks, says AC. Model No. AC GF-52 takes vapors from the fuel and



diverts them to the fuel tank via a return line. The device includes a stand pipe housed in a base casting and glass dome and the return line. It is fitted to the fuel line next to the carburetor.

LP Gas Converter

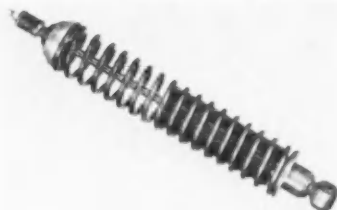
from American Liquid Gas Corp.
1109 Santa Fe Avenue
Los Angeles 21, Cal.

is designed for use on internal combustion engines up to and including 130 hp. Designated Model No. 1950, the unit converts butane-propane from liquid to dry gas, providing vaporization in two stages. They are equipped with either electric or manual primers.

Auto Load Leveler

from Monroe Auto Equipment Co.
Monroe, Mich.

is designed to keep heavily loaded passenger cars on an even keel for keeps, says the manufacturer. The "Load-Leveler" tends to end sagging rear springs, neutralizes bucking on sudden stops and prevents sway when

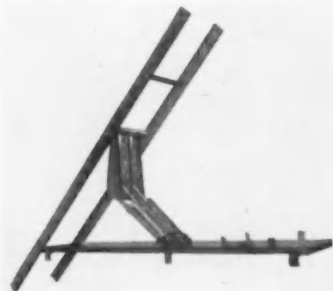


cornering. It replaces the rear shock absorbers, one on each side, and uses the same drill holes as the old shocks for its mounting.

Hydraulic Hoist

from Schwartz Mfg. Co.
Lester Prairie, Minn.

uses flange plates on the lifting assembly to improve strength. The Schwartz "Uni-Link" hoist has been completely redesigned to eliminate



welding when mounting on the body. The rubber hose has been replaced with a tubular steel oil return line running along the hydraulic cylinder. It is available in both standard and conversion models.

(TURN TO PAGE 176, PLEASE)

BUYING FILTERS FOR YOUR FLEET?

If so

USE THE COUPON BELOW

BEFORE YOU FINALLY DECIDE . . . SEE WHAT BRIGGS
HAS DONE TO MAKE YOUR FILTER DOLLAR BIGGER

A NEW LOW COST full flow filter replacement cartridge that does not affect any oil detergents, offers MORE ROAD MILES . . . puts a NEW FEELING in engine performance.

GET FACTS AND PRICES

Write for big 20" x 3 1/2" fact and conversion sheet; gives you the data you need to start putting your truck, bus or tractor through its paces. No obligation to you.



OIL FILTERS



THE BRIGGS FILTRATION COMPANY
DEPT. 224, WASHINGTON 16, D. C.

YES! SEND ME YOUR COMPLETE BIG AUTO-
MOTIVE FILTER FACT SHEET SO THAT
I CAN WRITE FOR PRICES, LATER.

NAME
COMPANY
ADDRESS



**HERE'S WHY ... drivers and owners
prefer a TIMPTE sleeper cab!**

LIGHTWEIGHT! STURDY! COMFORTABLE!

The installed weight of a TIMPTE Sleeper cab is only 325 pounds, yet it is so well constructed that it is not uncommon for a TIMPTE Sleeper Cab to outlast two or more truck chassis. Payloads move *Faster* and *Safer*, too. TIMPTE Sleepers always provide sound restful sleep for drivers . . . more profit for you!

Write Today for
Further Information

**TIMPTE
DENVER**

TIMPTE BROS., INC.
40th and York • Denver 5, Colorado

For dependable Diesel starting
in freezing weather...



Specify **Leece-Neville** heavy-duty
DC equipment!



L-N DC GENERATORS—
heavy-duty, high output,
low charging speed
cut-in.

**L-N VOLTAGE
REGULATORS** —
constant level volt-
age control, rug-
ged construction
for long life.



L-N CRANKING MOTORS
— maximum torque, fast
cranking of high compression
engines for quick, sure starts.



L-N MAGNETIC SWITCHES
—totally enclosed, water-
proof, long-life contacts,
standard mounting dimen-
sions available.

● Plenty of power is needed to start modern Diesels, especially in cold weather!

It takes maximum torque, delivered by a dependable cranking motor... controlled by an efficient magnetic or series-parallel switch... powered by a battery kept fully charged by a high-output generator and regulator. Leece-Neville heavy-duty dc electrical systems meet these exacting requirements.

Whether you build or buy Diesel engines, it will pay you to find out more about L-N dc systems. See your local Leece-Neville distributor or write direct to The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities... service stations everywhere.*

AA-4371



**L-N SERIES-PARALLEL
SWITCHES**—new sin-
gle unit type, compact,
exclusive contact
design.

**YOU CAN
RELY ON**

**Leece-
Neville**

Automotive Electrical Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



DC GENERATORS



REGULATORS



CRANKING MOTORS



SWITCHES



SMALL MOTORS

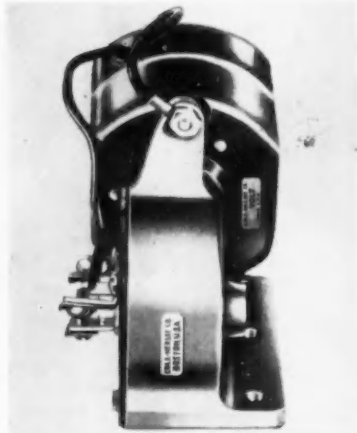
New Products

Continued from Page 174

Motor Driven Flasher

from Cole-Hersee Co.
20 Old Colony Ave.
Boston 27, Mass.

features flexible lamp loads for emergency vehicles. It allows for a 10-amp capacity in each circuit. Cycling rate



is not affected by lamp load. Its maker claims the bulb filament always comes to full peak with each "on" period of cycle.

Liquid Lock Washer

from American Sealants Co.
103 Woodbine St.
Hartford 6, Conn.

sets up nuts and bolts so securely, the manufacturer says, that no amount of vibration will shake them loose. They can be removed with ordinary tools, however. A thread locking kit of "Loctite" sealant has been especially designed for use in maintenance and repair work. The liquid is applied directly onto the assembled bolt or nut.

Powdered Acid

from Oakite Products, Inc.
126-D Rector St.
New York, N. Y.

is used to remove scale and rust, especially from circulating systems containing dissimilar metals. The acid powder is dissolved in water immediately before it is applied to the system to be cleaned. The manufacturer claims acid fumes and shipping problems are reduced through its use.

Bead Expander

from May Brothers Mfg. Co., Inc.
East Lansing, Mich.

is called the "Mighty M" and features both automatic and manual safety valves. The bead expander



for tubeless truck tires releases its pressure when the air inside the tire and inside twin operating pneumatic cylinders are equalized at 6 lb. It can be operated by one man.

Trailer Lamp

from Fostoria Pressed Steel Corp.
Fostoria, Ohio

is mounted at dock doorways to beam high intensity light directly into the

(TURN TO PAGE 180, PLEASE)

SAVE YOUR TARPS... With Weatherproof Rubber Springs

Installed in Rope Lashings to "Give" When Tarpaulin Shrinks

Tarpaulins on open-top trailers can now be kept lashed down tight, through wet and dry weather, by the use of rubber "springs" called "Tarp-Tethers".

The "Tarp-Tether" is an elastic rod of long-lasting synthetic rubber about ten inches long with an eye at each end. It is installed in the rope lashing with slack rope allowed between the eyes. The tether permits the lashing to "give" when the tarp gets wet and shrinks—no grommets ripped out. Then, as the tarp dries and stretches, the tether takes up the slack and holds the lashing tight—no damage due to wind whipping.

One truck equipped with "Tarp-Tethers" will quickly demonstrate the important savings they provide in tarpaulin repairs and replacements.

Write for Complete Information and Prices

RUBBERHIDE CO., INC.
BOX 631-C, TRENTON, NEW JERSEY



Brown
aluminum
trailers

**HIGH STRENGTH,
LIGHTWEIGHT WHEELS**

Mean More Payload, Less Maintenance

NOW! You can buy Brown Aluminum Trailers equipped with Budd Carbon Steel Wheels for tubeless tires, at the same price you pay for demountable wheels.

The Budd forged steel hub and alloy drum combine to give high strength and tough, dependable service, along with a substantial weight saving—for hub and drum together weigh just 114 pounds!

The result—greater payloads—lower maintenance costs, and literally—money in the bank.

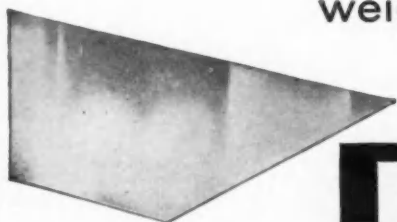
For complete details, call your nearby Brown trailer distributor, or write to:

BROWN TRAILERS, INC.
SPOKANE... CHICAGO... READING
Sales & Service Coast-to-Coast



JALTEN low alloy high-strength J & L steel

provides
equal strength
with lighter
weight



Jalten permits high design loads with reduction in section. Usual reduction is two gages with weight saving as much as 25%.

High strength of Jalten is the result of balanced chemical composition which is carefully controlled during production. Jalten's strength is retained through fabrication and welding without further heat treatment.

Jalten is available in the forms you require (plates, hot rolled sheets, hot rolled bars, small shapes and structurals). Jalten can be purchased in three grades to meet specific requirements for high strength, formability, impact, resistance to corrosion.

Your local distributor can supply you with information on Jalten, or you can write direct to the Jones & Laughlin Steel Corporation, Dept. 432, 3 Gateway Center, Pittsburgh 30, Pennsylvania.

Jones & Laughlin
... a great name in steel

Heft the new CP LITTLE GIANT Reversible Air-Wrench. You'll find it's 13 to 15 pounds lighter than air wrenches of the same power rating—and 25% shorter . . . takes on jobs other tools can't touch. It gets into spots you never thought possible, is balanced for effortless handling. And the LITTLE GIANT is equipped with the exclusive new

VARI-TORK Power Converter for adjusting wrench output to your exact requirements . . . and there's power to spare! Attachable Angle Heads do ratchet wrench jobs. Call your jobber or mail coupon for a demonstration or complete information. Chicago Pneumatic Tool Company, 8 East 44th Street, New York 17, N. Y.



REVOLUTIONARY NEW POWER CONVERTER

Frozen nuts on Budd wheels meet their master! The LITTLE GIANT'S all-new VARI-TORK Power Converter is the most powerful, efficient and trouble-free impact mechanism ever built. Every ounce of motor output is converted into hard-hitting impact blows by the fly-wheeling action of the striking hammer. Power losses created in compressing springs or overcoming the drag of centrifugal force are eliminated.

for streamlined slugging power . . .



THE NEW CP LITTLE GIANT AIR-WRENCH!

1" drive . . . 1 $\frac{1}{4}$ " bolt capacity



Chicago Pneumatic

AIR AND ELECTRIC IMPACT WRENCHES • BEAD BREAKERS
ZIP-GUNS • PNEU-DRAULIC TRUCK JACKS AND PUMPS

CALL YOUR JOBBER OR MAIL COUPON, TODAY!

Chicago Pneumatic Tool Company, Dept. A-76
8 East 44th Street, New York 17, N. Y.

☐ Please arrange FREE DEMONSTRATION. No obligation.

☐ Please send me FREE Little Giant literature.

Name _____

Company _____

Address _____

City _____

Zone _____

State _____

New Products

Continued from Page 176

trailer. It is called the "Docklite." The ventilated heat shield reflector is designed to accommodate R-40 150 watt lamps. The two 15 x 5/8 in. steel tubing lamp arms are equipped with four collar joints which revolve 360° and three frictional disc joints which move 270°.

Creative packaging



of Globe dry-charged battery puts all ingredients together for swift, easy activation with fresh power . . . instant replacement at any service point.

15 of Globe's 17 plants now producing dry-charged batteries . . . write:

GLOBE-UNION INC.
MILWAUKEE 1, WISCONSIN

Manufacturers of:

- TRAILER JOCKEYS • FIFTH WHEEL CRANES • MOBILE MACHINE SHOPS • SPLIT-SHAFT POWER TAKEOFFS • HYDRAULIC DOCK RAMPS



CEMCO INDUSTRIES, Inc.
GALION, OHIO

CAR WASHERS



AUTOMATIC
ALL PURPOSE
SYSTEM
REVOLUTIONIZES
VEHICLE WASHING

Wohlert
Corporation
LANSING 5 MICHIGAN

Test these Thermoid products on the toughest job in your fleet!

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment.



Thermoid Co., Trenton, N.J.

Lift Truck Radio

from Motorola Inc.
4501 W. Augusta Blvd.
Chicago 51, Ill.

is a transistorized two-way radio, which has printed circuits to conserve space. It is available for all battery



voltages found on industrial vehicles from 6 volts up. With various snap-on power supply packs, the radios are interchangeable from one vehicle to another. They are offered in two design styles—the self-contained unit for mounting near the driver, and the two-piece model which allows the speaker and microphone to be placed near the driver and the rest elsewhere.

Muffler Clamp

from Merit Mufflers
Toledo, Ohio

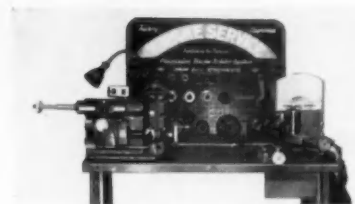
exerts sealing pressure equally around the entire pipe and muffler nipple and when tightened forms a complete 360°



bead. The manufacturer says the saddle will not collapse when drawn tight. "Shur-Seal" clamp has circular, full-length channels on each side for the U-bolt. It has a one-piece saddle.

Classified Advertisement

WANTED: USED GM71-110 DIESEL INJECTOR PARTS. AL, 2093 E. 19TH ST., CLEVELAND 15, OHIO.



Portable Brake Shop

from Barrett Equipment Co.
2101 Cass Ave.
St. Louis 6, Mo.

includes a "Drum-Dokter" lathe and "Brake-Dokter" radius grinder on a portable steel work bench.

'58 Passenger Cars

Continued from Page 69

As one wheel loses

traction, it spins. This spin produces a centrifugal force in the differential that engages a pair of clutches to put power onto the other side of the rear axle. Only additional maintenance required is occasional clutch replacement.

New "X" frame used by Chevrolet and Pontiac is worth noting. It provides a rigid unit without conventional frame side rails. This frame plus two universal joints on the drive line give a considerably lower floor height. Coil springs all the way around on these two cars make it easy to mount optional air suspension when desired.

Ford's new power

plant (referred to above) is a 352-cu in. V-8 with 300 hp rating. Also new is a 332-cu in. V-8. Chevrolet has a new V-8 engine with 348-cu in. displacement. This engine has "chisel" pistons and a flat head. This puts the combustion chamber entirely in the block.

Ford has announced a new automatic transmission, the "Cruise-O-Matic." Its features include a new Sprag, one-way clutch to eliminate rear and front band synchronization along with new governor and serve assemblies that cushion gear shift feel.

END

Please Resume Reading Page 70



The Equipment Superintendent of the Ohio Turnpike shows how easily the test is made.



A toll gate on Ohio Turnpike . . . one of America's newest highways.



The simple test reveals many things about a vehicle's engine, and individual cards give a permanent record. The Indicator Fluid is covered by Patent No. 2,770,530.

OHIO TURNPIKE REPORTS:

"Greater oil economy . . .
reduced maintenance costs . . .
thanks to the SHELL ADC Oilprint Analysis."

THE OHIO TURNPIKE operates 225 maintenance and patrol vehicles over its new highway to assure *maximum road safety*. The Shell ADC* Oilprint Analysis was recently adopted so that the oil in every vehicle in the fleet can be constantly checked.

With just two drops of oil, the ADC Oilprint Analysis gives a fast, periodic, on-the-spot check of existing oil conditions. Unnecessary oil changes are eliminated, and in addition, costly engine repairs can be avoided when potential engine trouble is revealed. All this is ac-

complished in just a few minutes.

Let a Shell Representative demonstrate the simple application of this program. You'll see for yourself why cost-conscious fleet operators are proving the Shell ADC Oilprint Analysis a valuable preventive maintenance tool. *Trademark

SHELL OIL COMPANY

50 WEST 50th STREET, NEW YORK 20, N. Y.
100 BUSH STREET, SAN FRANCISCO 6, CALIF.



Dec. News Roundup

Continued from Page 102

should immediately start planning for the future—for the day when these roads, too, will be obsolete."

Charles E. Wilson

is again on the General Motors board of directors. After his resignation from President Eisenhower's cabinet, the former GMC president was given a seat by other board members.

He had been in government service since Jan., 1953.



New York — Present New York State highway-use tax plates and permits are invalid after Jan. 1, 1958. Renewal plates and permits will have to be obtained. Fee is \$4 for each vehicle.

1957 Truck Trailer Shipments

Type	September	Nine Months
Vans		
Insulated and refrigerated	366	3,632
Steel	41	499
Aluminum	325	3,133
Semi-insulated	56	464
Steel	56	464
Aluminum		
Furniture	75	1,278
Steel	75	1,278
Aluminum		
All other closed-top	1,834	15,631
Steel	717	7,168
Aluminum	1,117	8,463
Open-top	292	2,440
Steel	170	1,249
Aluminum	122	1,191
Total—Vans	2,623	23,445
Tanks		
Petroleum	289	3,388
All other	119	1,125
Total—Tanks	408	4,513
Pole, pipe and logging		
Single axle	35	307
Tandem axle	42	500
Total	77	807
Platforms		
Racks, livestock and stake	195	1,842
Grain bodies	74	1,048
Flats, all types	404	5,211
Total—Platforms	673	8,101
Low-bed heavy haulers	158	2,308
Dump trailers	141	1,609
All other trailers	257	2,703
Total—Complete trailers	4,337	43,486
Chassis only	483	3,383
Total—Trailers and chassis	4,820	46,869

Source: Industry Division, Bureau of the Census.



Holland (Mich.) Motor Express, Inc., — to 20 drivers and terminal workers at a safety meeting in Indianapolis, Ind. And at Chicago, to nine more drivers with records ranging up to 10 years of safe driving.

Motor Freight Express, York, Pa. — National Safety Council awards to nine drivers with a total of 45 years of safe driving.

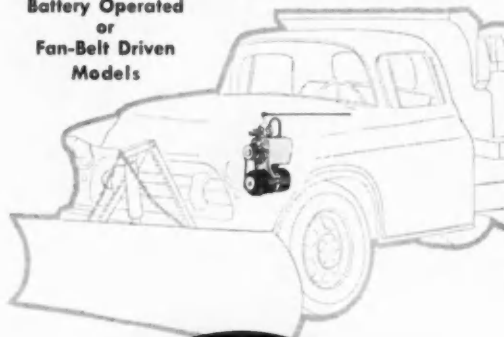
Kenosha (Wis.) Auto Transport Corp., — to the company's Chicago drivers for 1.2 million accident-free miles.

Consolidated Freightways, Indianapolis, Ind. — to 78 Minneapolis road drivers with over a million accident-free miles.

Fruit Industries, Inc., Bradenton, Fla. — to 49 drivers with records of
(TURN TO PAGE 184, PLEASE)

Lift Snow Plows . . . automatically!

Battery Operated
or
Fan-Belt Driven
Models



POWER

MONARCH
HYDRAULIC

CONTROLS

Lift or lower your snow plow automatically . . . with Monarch Power Hydraulic Controls. One man operates the plow right from the truck or jeep cab. Snow removal is faster, easier and more efficient. See your dealer or write for full details.

MONARCH ROAD MACHINERY COMPANY
1331 MICHIGAN ST., N.E. — GRAND RAPIDS 3, MICHIGAN

STOUX

ELECTRIC IMPACT WRENCH

No. 325 \$99.75
No. 330 \$127.50

WITH THE EXCLUSIVE REVERSE CAP SWITCH LOCK. IT CAN'T BE REVERSED WITH THE SWITCH ON. IT LASTS LONGER.

ALBERTSON & CO., INC.
SIOUX CITY, IOWA, U.S.A.

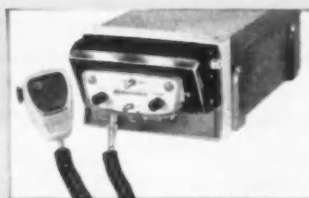
BUY BONDS



NEW
MOTOROLA
DUAL-SQUELCH
PRIVATE-LINE
2-WAY RADIO...



***silences all channel traffic
except your own messages***



PRIVATE-LINE radiophone is now available in T-POWER (shown above), which features a completely transistorized power supply, as well as TWIN-V radio with 6/12 volt operation.



Get the complete facts about this startling new type of 2-way radio. Write today for these 2 new folders on PRIVATE-LINE radiophone.

Now, with the new Dual-Squelch PRIVATE-LINE radio, you get all the benefits of improved PRIVATE-LINE operation . . . *plus* easy integration for mixed fleets and monitor-before-transmit.

Because PRIVATE-LINE radio is quiet except when receiving a call from another radio in your own system, you eliminate all the "channel chatter." It's much like having the frequency all to yourself. You benefit by reducing the number of missed or misunderstood messages . . . operator fatigue is reduced . . . overall efficiency is increased.

Dual-Squelch PRIVATE-LINE radio gives you these basic features . . . and more. Now you can make a gradual changeover to PRIVATE-LINE operation. During the transition period, your messages can be received by both Motorola conventional and PRIVATE-LINE radios. No longer is it necessary to make the complete changeover to PRIVATE-LINE operation at the same time. And with the new Dual-Squelch operation, you can have manual selection or optional automatic monitoring of the channel before transmitting.

Before you select your 2-way radio, you'll want to investigate Motorola Dual-Squelch PRIVATE-LINE radio.



MOTOROLA

PRIVATE-LINE RADIOPHONE

MOTOROLA Communications & Electronics, Inc., A Subsidiary of Motorola, Inc., 4501 Augusta Boulevard, Chicago 51, Illinois

Change TUBELESS TRUCK Tires

Faster ...

**KEN
T-45**

Busses
Trucks
Tractors



Mounting first bead



Mounting second bead

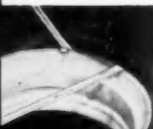


Final step in
demounting first bead

Easier ...
quality
job-designed
**TIRE
TOOLS**

Used and recommended by leading tire makers. New, improved design for mounting and demounting tubeless truck tires, on new one-piece drop-center rims without damage to sealing features. Simple to use. Length: 38".

Used in Pairs



Demounting first bead



Demounting second bead

T-45

SEE YOUR JOBBER!

SAVE LABOR, TIME AND MONEY. INSIST ON KEN TOOLS. Finest Quality and Design. Largest Exclusive Mfgs. of Tire Changing Tools and Equipment.

The KEN-TOOL Mfg. Co.
AKRON 5, OHIO

KINNEAR STEEL ROLLING DOORS

Most of the world's goods pass through one or more Kinnear Rolling Doors before reaching their destination.



KINNEAR
ROLLING DOORS

The KINNEAR Mfg. Co. 2100-20 Fields Ave. Columbus 16, OHIO

for greatest
overall economy

**WAUKESHA
ENGINES**

DIESEL • GASOLINE
NATURAL GAS • LP GAS

Dec. News Roundup

Continued from Page 182

safe driving, including 735,000 miles by one driver.

Evening Star Newspaper Co., Washington, D. C.—to 82 drivers, including two who received 25-year National Safety Council pins.

Interstate Dispatch, Inc., Chicago—to 25 of the 30 eligible drivers, for records of up to nine accident-free years.



Ringsby Truck Lines, Denver, Colo., has instituted a system-wide series of safety training courses known as Operation Personal Safety.

St. Louis (Mo.) Public Service Co. has announced plans for all of its ex-

press and special service buses to be air conditioned by the beginning of next summer. This will require installation of air cooling equipment on 100 more buses, to add to the property's present air conditioned fleet of 140.

Los Angeles-Seattle Motor Express has equipped 36 of its local pickup and delivery trucks in the Los Angeles area with two-way radios. Plans are underway for installation of the radio units in San Francisco.

An "Oscar of Industry" award will be presented to Pacific Intermountain Express, Oakland Cal., for its 1956 annual report, judged finest in the bus and truck fleet industry, by a financial magazine.

Biddeford & Saco (Me.) Bus Lines, has put into effect a transit validation "Ride and Shop" plan, providing a free bus ride home in return for a two-dollar purchase downtown.

R-C Motor Lines, Jacksonville, Fla., is celebrating its silver anniversary year.

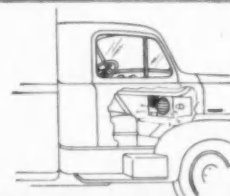
Consolidated Freightways, Portland, Ore., has initiated a "Daysaver"

HUNTER

Transport Heating
and Refrigeration

CAB HEATERS

safe, sure heat
at low cost
for gas or diesel rigs



- shirt sleeve warmth in coldest weather
- gasoline-burning, thermostatically controlled
- operate independent of vehicle engine
- eliminate costly engine idling
- sub-zero starting, unfailing combustion
- conform to all ICC regulations
- economical, compact, easy to install



MODEL UH-47



Write for descriptive literature and prices
HUNTER MANUFACTURING COMPANY
30525 AURORA ROAD, SOLON, OHIO

non-stop motor freight service between its eastern and western regions. The system utilizes two-man driving teams to cut on-the-road freight time. The company is also offering customers, "Transi-Timers," which computes the time required for the "Daysaver" runs.

United Parcel Service, founded in Seattle, Wash., in 1907, is celebrating its golden anniversary with a white and gold booklet describing its history and services.

Hoover Motor Express, Nashville, Tenn., has added 50 Trailmobile integral post, all-steel vans to its fleet.



Robert G. Oakley has been appointed branch manager for the Cleveland, Ohio, White Motor Co. branch. White distributor in San Diego, Cal., area, Southwest Equipment Co., has moved to a new address — 3552 W. Camino Del Rio.

William D. Gohr has been appointed sales manager for air springs, Firestone Industrial Products Co., Akron, Ohio.

Globe-Union Inc., Milwaukee, Wis., is building a 70,000 sq ft storage battery manufacturing plant in Tampa, Fla.

Construction has begun at Anaheim, Cal., for a sales and service training center to serve Chrysler Corp. dealers in the western states.

Walter E. Thill has been appointed chief engineer of the recently established Federal-Mogul Service Engineering Dept., Detroit.

International Harvester Co. is constructing six truck sales and service facilities in California.

Charles Lawrence Schneider, former executive vice-president of Fruehauf Trailer Co., has been elected president and a director of Trans Continental Industries, Inc., Detroit. Trans Continental received OK last month from stockholders on both sides to buy Highway Trailer Co.

END

Please Resume Reading Page 160

HUNTER

Transport Heating
and Refrigeration

LP GAS CARGO HEATER

**Positive
Protection for perishable cargos**

- exclusive new jet-type burner forces high volume of clean heated air to every corner of cargo space
- available in two models: UH98 for permanent installation; UH99 self-contained portable unit
- operates for 24 hours at top heat — at very low cost — 16,000 BTU per hour
- completely independent of vehicle engine and battery
- accurate thermostatic control — no "hot spots" — no "cold spots"
- no moving parts — no maintenance problems
- safety pilot — meets all ICC safety regulations
- compact — takes up less cargo space — permits more "cube"
- operates in coldest weather — on or off the road



MODEL UH-99



Write for descriptive literature and prices
HUNTER MANUFACTURING COMPANY
30525 AURORA ROAD, SOLON, OHIO

TIRE INDUSTRY AUTHORITIES SAY

YOU CAN'T MOUNT THE NEW 14" TIRES WITHOUT AN APPROVED LUBRICANT

14" Tubeless tire and rim design and construction is different—tires are built with stiffer beads and fit tighter to the rims. The rims have shallower drop center well and almost all have safety humps. As a result the use of an approved lubricant is not just desirable, but is ABSOLUTELY ESSENTIAL for the safe, efficient mounting and demounting of these tires.

Always use

RU GLYDE®

The Approved Lubricant

**A MUST FOR SAFE
EASY TIRE POSITIONING,
PROPER BEAD SEATING,
POSITIVE AIR SEALING**



An approved lubricant is one that has sufficient wetting, lubricating and film strength properties on rubber, metal, painted surfaces, as well as the right coefficient of friction ("controlled friction") and is harmless to rubber, metal and wheel finishes. Always be sure . . . use Ru GLYDE . . . the only industry-wide APPROVED tire lubricant. It removes the risks in handling all sizes and types of tires and rims; increases your efficiency and profit.

R-334

NEW TUBELESS TIRE INSTRUCTION BOOKLET . . . NOW AVAILABLE!

Write for free copies of the new, 12-page booklet, "Simply Awful or Awfully Simple". Describes and demonstrates the correct procedure for servicing all types and sizes of Tubeless Tires, including the new 14" and 15" wheels.



AMERICAN GREASE STICK CO.
MUSKEGON, MICHIGAN



A section of the Eastern Express terminal in Chicago, Illinois

Eastern Express, Inc., one of the largest motor

RAYON CORD

Eastern Express, with general offices in Terre Haute, Indiana, operates mostly between industrial points in the Midwest and in the Atlantic States, New England excluded. Eastern Express trucks average over 30 million miles yearly, or the equivalent of more than three times around the world every day. By far the great majority of this mileage is covered by rugged RAYON CORD TIRES!

Eastern Express finds Rayon Cord Tires pay off

in greater mileage—average original mileage is 67,000, with an average of one-and-a-half recaps per tire. But it is Rayon's *safety* that pays even greater dividends to Eastern Express. Here is proof: Eastern is the proud owner of a tire performance and safety and claim record—the first major carrier to go over 2,000,000 miles *without an accident of any kind!*

Eastern is the first major carrier operating between large industrial areas to receive a safety trophy from

or

D

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But
nds
oud
aim
iles

een
om

7



One of Eastern's largest trailer trucks, and it rides on Rayon!



Eastern receives trophy for 2,086,134 accident-free miles.

carriers in the U. S. proves

TIRES PAY OFF!

National Freight Claims Council of A.T.A. Eastern has also been awarded a trophy from Transportation Underwriters for having gone 2,086,134 miles without an accident.

This impressive safety record is largely due to Rayon's dependability and Eastern's strict tire-checking program. Each tire carries a decal which establishes correct pressures and rotation dates for that particular tire.



Records show that more truckers use **RAYON CORD TIRES** than any other. They can rely on Rayon because Rayon pays off!

AMERICAN RAYON INSTITUTE, INC.
350 Fifth Avenue, New York 1, N. Y.



"Everybody thought my boss was crazy"

Wham!—down she came—20,000 lbs. of solid casting. And there was just no way we could center the load on my truck.

●Everybody figured this job would make a pretzel out of my truck. I had my fingers crossed, too, because those siderails were in for the toughest, twistingest highway hauling job they'd ever had!

"Let 'er roll," the boss said. He wasn't worried at all, and he was right.

The truck handled fine all the way, even with that 10-ton load off-center. Those siderails were as straight after that torture as the day they came out of the PARISH PRESSED STEEL plant. The boss told me why, after the casting was delivered and we were giving the truck frame a careful once-over, back in our shop.

"These PARISH siderails can take a tremendous pounding,"

the boss said, "because they're made of steel having the highest tensile strength ever put into a highway truck frame. We use them because they give us almost the lightness of aluminum, and they're still strong enough to take the mauling we give them with the kind of mixed loads we haul. The steel in my PARISH siderails has a very, very high guaranteed yield point—85,000 psi., but you can also get them with a slightly higher yield point of 110,000 psi."

Special heat treating that knits together the steel's fine grain structure, and what the boss said about the extra fine steel PARISH uses—that's pretty technical for me. I guess it really just means PARISH siderails are awfully strong and awfully good. I know, because I've seen them prove it.

(based on an actual case history)

PARISH FRAME ENGINEERING SERVICE is available to you and your truck manufacturer at no obligation. Whether your problem is maintenance or new design, it will pay you to use the experience of the world's largest manufacturer of heavy duty truck frames.



PARISH PRESSED STEEL

DANA

Division of Dana Corporation / Reading, Penna.

Push-button starting!



New Wisconsin Air-Cooled Engine-powered Reefer Kit modernizes every truck in your reefer fleet

Now you can buy a powerful Model ACN 6 Hp. or BKN 7 Hp. Wisconsin Air-Cooled Engine with electric starter and remote control starting button that mounts at a handy, convenient height for operator. Picture at left shows how simply, how easily the Wisconsin Engine is started while operator stands on ground. Your truck battery provides the starting power. This low cost kit will help you maintain good safety records and build your drivers' morale. Use coupon. Get details.



Obsoletes "Grunt'n Groan" Starting

No more dangerous balancing acts on slippery truck chassis while operator tugs on rope starter. New, low cost Wisconsin Engine reefer kit keeps operator on the ground, eliminates dangerous falls.

Here's what you get

Model ACN or BKN Wisconsin Air-Cooled Engine with 6 or 12 volt electric starter, solenoid starting switch, choke control, terminal box with receptacle less wiring. Complete installation instructions furnished.



**WISCONSIN
MOTOR
CORPORATION**
MILWAUKEE 46, WISCONSIN

World's largest builder of heavy-duty air-cooled engines

WRITE FOR NAME
OF NEAREST DISTRIBUTOR

More than 2,000 service stations...
several near you.

Please send "spec" bulletin form S-203 with engineering data and prices.
We operate _____ reefer trucks.

Name _____

Firm _____

Address _____

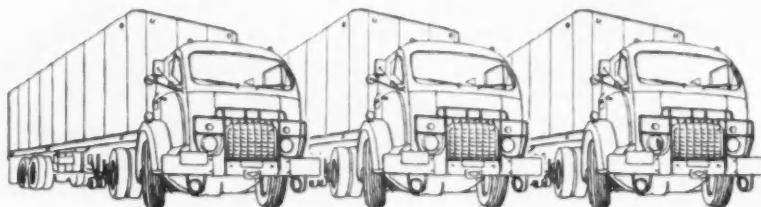
City _____ Zone _____ State _____

A7-6100



**power
dependability
accessibility**

... incomparable in America's newest reefer,
designed and engineered for America's
great frozen foods industry.



McGRAW-EDISON CO., Clark Division
5201 W. 65th St., Chicago 38, Ill.

TROPIC-AIRE



MOBILE REFRIGERATION / AIR CONDITIONING

*"Tropic-Aire—Carrier" is a trademark of McGraw-Edison Co., Chicago, Illinois, makers of "Toastermaster" toasters and other "Toastermaster" and "Tropic-Aire" products. Copyright, 1957, McGraw-Edison Co.

3 in 1 LAMPS



No. 431
Single faced
fender mount



No. 432
Single faced
flush mounting



No. 433
Single faced
bracket mount

STOP • TURN • TAIL

by **MIRO-FLEX**

TURN SIGNAL SWITCH



Miro-Flex offers a choice of either a self-cancelling or manually operated turn signal switch. Both are housed in sturdy metal case that clamps on steering post. They are easy to install and come complete with flasher and fuse assembly.

These versatile Miro-Flex lamps have three different safety functions all in one package—as a *TAIL* light, *STOP* light, and as a Class A *DIRECTIONAL* signal. They are equipped with either 6-volt or 12-volt double-filament, 3-21—candlepower bulbs and with either red or amber 4" lenses. Exceptionally long life is assured with heavy steel housings and dust- and water-proof construction. They exceed all S. A. E. requirements. They are available for fender, flush, or bracket mounting. Complete sets include two standard Miro-Flex double-faced fender mount lamps, either manual or self-cancelling turn signal switch, wiring, and your choice of rear lamps. *The safest way to be sure is to always equip with Miro-Flex*, a complete line of safety equipment for trucker and fleet operator, including the original Miro-Flare.

THE

MIRO-FLEX

CO., INC.

1824 EAST SECOND STREET

WICHITA 7, KANSAS

Please send me a complete catalog showing the 3-in-1 Lamps and other Miro-Flex safety equipment.

NAME _____

ADDRESS _____

TOWN _____

STATE _____



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SAFE!

**CLEAN AUTOMOTIVE
& INDUSTRIAL PARTS
3 WAYS!**

1. Continuous Flow Hose
2. Air Agitated Soaking Tank
3. "Super Power" Jet Air Gun



A must in every service shop!

**Kleenflo SUPER
CLEANMASTER
MODEL 50**


Write for Literature:
America's Foremost Producer of Parts Cleaning Equipment
PRACTICAL MFG. CO.
2840 4TH AVE. S. • MINNEAPOLIS, MINN.

Model 30 (less
Jet Air Gun)
also available


SPECIALIZING IN ...

YOCAR AiRide



HOOBLER UNDERCARRIAGE



**LIGHT & HEAVY FABRICATIONS
AND WELDMENTS**

YOUNGSTOWN STEEL CAR CORPORATION
NILES 6, OHIO



Specify
W.G.B.
**REPLACEMENT
CARTRIDGES**

and get all the lubrication
good oil provides

Available for all popular makes of filters
WRITE FOR COMPLETE DETAILS AND NAME OF NEAREST DISTRIBUTOR

W.G.B. OIL CLARIFIER, INC.
KINGSTON • NEW YORK

B.F. Goodrich



These B.F. Goodrich Traction Express tires have rolled 125,000 miles on original tread!

FROM its headquarters in St. Louis, Missouri, Allhoff Brothers, Inc., sends out 17 trucks and 4 tractor-trailers to haul feed and building materials all over the Middle West. Eight hours a day, 6 days a week, Allhoff equipment rolls over concrete and gravel roads in temperatures ranging from zero to 100°.

Those are tough conditions for *any* tires; but Allhoff, using B.F. Goodrich

FLEX-RITE NYLON Traction Express tires, regularly gets 125,000 miles on the original tread before retreading!

And this is *not* an exceptional case. Other users report that B.F. Goodrich Traction Express tires give them as much as 160,000 miles before retreading. That's because the Traction Express tread is 33% thicker than that of a regular tire.

And under the thick tread is the B.F. Goodrich FLEX-RITE NYLON cord body that withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks. No wonder the *all-nylon* Traction Express body outwears even the extra-thick tread, *can be retreaded over and over!*

See the Traction Express at your B.F. Goodrich dealer's. He has a complete line of tubeless and tube-type tires for every trucking job. Or write B.F. Goodrich Tire Company, A Division of The B.F. Goodrich Company, Akron 18, Ohio.

Specify B.F. Goodrich tires when ordering new trucks or trailers




"B.F. GOODRICH TRACTION EXPRESS tires have given us by far the lowest cost per mile of any tire we have ever used," reports Clay Hyder Trucking Line, Hendersonville, N. C.



"100% MORE MILEAGE than any other brand used," says Thermo-Insulation, Inc., Phoenix, Arizona, of B.F. Goodrich FLEX-RITE NYLON Traction Express Tires.



Your B.F. Goodrich dealer is listed under Tires in the Yellow Pages of your phone book



**OSCAR and
JOE SERVICE**

pull a quick switch



HOW LONG AM I GOING TO BE TIED UP WHILE YOU SWITCH TIRES, JOE?

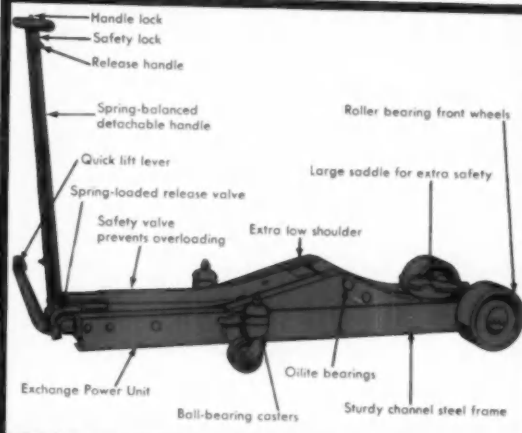
COME ON BACK AFTER LUNCH AND I'LL TELL YOU.



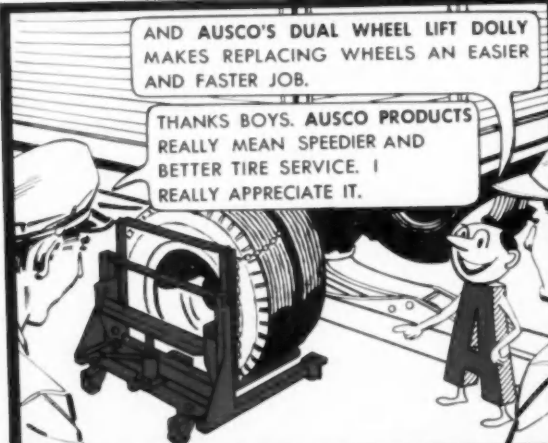
WOW! HOW'D YOU DO IT SO FAST?

LATER

WITH THIS BIG SAFE AUSCO SERVICE JACK ON THE JOB, WE CAN LIFT ANYTHING FASTER, SAFER, EASIER.



Handle lock
Safety lock
Release handle
Spring-balanced detachable handle
Quick lift lever
Spring-loaded release valve
Safety valve prevents overloading
Exchange Power Unit
Roller bearing front wheels
Large saddle for extra safety
Extra low shoulder
Oilite bearings
Ball-bearing casters
Sturdy channel steel frame



AND AUSCO'S DUAL WHEEL LIFT DOLLY MAKES REPLACING WHEELS AN EASIER AND FASTER JOB.

THANKS BOYS. AUSCO PRODUCTS REALLY MEAN SPEEDIER AND BETTER TIRE SERVICE. I REALLY APPRECIATE IT.



AUSCO OFFERS YOU A COMPLETE LINE OF RUGGED, SAFE AND EASY-TO-USE SERVICE JACKS. CALL YOUR AUSCO JOBBER NOW.

10 T.
4 T.
2 T.
1½ T.
1¼ T.

AUSCO Jacks

AUTO SPECIALTIES MFG. CO., INC., St. Joseph, Michigan
Other Plants in Benton Harbor and Hartford, Mich. and Windsor, Ont., Can.

AUSCO...
Manufacturers
of Quality Jacks
for every
service need!



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